Virginia Medical Monthly

Official Organ of the Medical Society of Virginia

Vol. 52, No. 5, WHOLE No. 878. RICHMOND, VA., AUGUST, 1925 20 CENTS A COPY $2.00 A YEAR

Original Communications

PATHOLOGY OF CATARACT.*

By H. S. HEDGES, M. D., Charlottesville, Va.

Pathology of cataract—the story of the changes in the lens and its capsule, changes found in all the life cycle from that of the child unborn down to old age, and presenting a multitude of varying conditions whose successful treatment will always present problems that are ever new and difficult to the attending physician.

To review the microscopic changes found in all the many, many kinds, would be an imposition on the good nature of this company; though the corneal microscope with the slit-lamp illumination is showing us many changes which we could never see before. The lens has not been an easy subject for sectional study; and though so many thousand have been removed, in the average case the cortex, and the epithelium of the anterior capsule, where so many of the changes occur which we would like to study, are so broken up by the removal that we do not get a true picture of conditions as they existed in the living eye. But in every case of cataract that comes to us, so far as possible we should get an accurate knowledge of the nature and duration of the opacity, of its cause, if possible, its rate of progress, if progressive, the size of the nucleus and consistency of the cortex, its relation to the other structures of the eye, whether complicated or not, the relative condition of the two eyes, and last, but not least so far as our treatment is concerned, the age, economic condition, general health, and mental and physical state of our patient must all be taken into careful consideration.

The one end and aim of all our cataract work must be to secure for the patient the greatest possible amount of comfortable use of their vision.

How the varying pathological pictures which we find will influence us in handling the cases which come to us will be the subject of our brief notes.

As to the average case of juvenile, congenital, traumatic or double senile cataract there is usually no question as to what is best to do, but we feel very strongly that in many cases of monocular cataract in the old and feeble, or even where there is only much difference in the maturity of the changes in the two eyes, operation is by no means always indicated, and in many cases is strongly contraindicated.

If in the case of an old or feeble patient there be a fully developed monocular cataract with the history of maturing slowly—and the older the patient usually the slower the rate—and the other lens is clear or shows only peripheral riders—especially if these be narrow—I believe that the cataract should be let alone. The chances are that the one eye will serve the purposes as long as life lasts. The operation for cataract is no small strain on the old and feeble; and with the other eye maintaining useful vision we all know that the aphakic eye will not be used, that its blurred image will often so disturb the other eye that a block will have to be worn, and the patient who was working comfortably with the one eye now worries you ceaselessly for glasses to use on the operated eye, and cannot understand why you do not give them. In other words, by operating, though it may be a perfect surgical success, instead of giving the patient more comfortable working vision, we have made it less so.

If, however, a younger person or one in still vigorous health, comes to us with a mature cataract in one eye, and the other showing definite signs of beginning trouble, we face a different problem, especially if the incipient riders are at all broad at their bases, or if there be any diffuse central cloudiness about the lens.

Such a case should be kept under close observation, and the mature lens removed before it shows the least sign of hypermaturity, or the other eye has lost its useful vision. Though the operated eye will not be used at

*Read as part of symposium on Cataract, at the meeting of the Virginia Society of Otolaryngology and Ophthalmology in Winchester, May 7, 1925.

XUM

first, and we find that the patient will cling to the use of the unoperated eye till the vision falls to 20/50 or even less, as soon as the vision does fail then the operated eye is ready for work.

When the catracts develop equally, we feel that the operation should be done as soon as the patient can no longer follow his regular vocation or read in comfort. It is wrong to condemn such a one to months or years of waiting for the cataract to mature.

In the study of each lens we should determine whether or not it is due entirely to senile changes, or to some antecedent disease of the eye. History will usually determine the latter for us, but not always. We must look carefully for any signs of old synechiae or deposits of pigment on the anterior capsule—with fully dilated pupil.

It always seems to me that during the process of senile cataract formation the lowered vitality of the lens finally reaches a stage in which the lens can be compared to a dead lens, being macerated by the surrounding fluids. We know that in some cases this process goes on fairly rapidly and continuously; that in others it may stop for years, or never advance at all.

In these cases we are not dealing with exogenetic noxious substances but they are due to changes in life (Vogt).

We know that over 90 per cent of lenses over sixty years of age show cataract changes. Why some go on to maturity, and others do not, we do not know.

The cataract due to other diseases of the eye, especially to disorders of the uveal tract, usually begins in the area of the posterior lens suture. The opacity is often rosette-shaped, as it extends in the direction of the suture, and shows an irregular porous or pumice-like structure, due to the development of vacuoles. Especially in the axial direction and in the area of the sutures the opacity extends directly forward into the cortex in the form of very irregular crumbly white opacities, surrounded by a thin white nebula. This porous structure, and the tendency to extend forward into the cortex, are important points of differentiation between the complicated and the senile types. In the latter there is no axial thickening. Often in the complicated type the opacity may not be in the center of the lens.

We must carefully determine the size of the nucleus, and the amount and consistency of the surrounding cortex.

A dark lens usually means a large nucleus. We are all familiar with the dusky black cataract in which the nucleus has enlarged till there is no cortex left.

We must study the condition of the suspensory ligament, and the relation of cortex to capsule. If we find fine vacuolation just under the anterior capsule, we know that the lens will shell out easily (if we are to do the capsulotomy operation).

Signs of hypermaturity should be carefully noted—the loss of the stellate markings, the dirty yellow look, the more or less tremulous iris, deep chamber, and often the darkre nucleus lying at the bottom of the capsular sac will show us what to expect.

While in the old a cataract often develops very slowly, in younger persons, in middle life, or between thirty and fifty, it will often mature in two or three months.

An interesting case came under our care last fall. A man of thirty, who at one time had been a drinker, developed a very severe case of Vincent's angina—so severe that for weeks it was almost impossible to get him to take food or fluids of any kind—pain of swallowing was so great that he would not swallow, and the bowels so irritable that enemas could not be retained.

Marked symptoms of pellagra developed, and he was reduced almost to a skeleton. As he began to improve, he noticed dimness of vision, but attributed it to weakness.

When first seen by us, vision was reduced to about 20/70, and reading large print. Fundus could be but dimly seen in either eye through what looked like a mass of fine foam (vacuoles) spread out over the anterior face of the posterior capsule, with broad riders shooting out into the cortex behind the center of the lens.

In less than two months useful vision was gone, and operative measures taken for his relief, to which he would not consent till he became so blind that he had to be led about by the hand.

In this case I believe that we had a parallel to the cataract developing in late cholera—the great loss of body fluids causing abstraction of fluid from the lens, with consequent separation of the fibres and later degeneration and vacuolation as fluid was absorbed again. On opera-

tion the lenses were uniformly opaque, firm, and separated easily from the posterior capsule.

Often the question arises: Is the opacity progressive, or is it not?

While often only repeated observation can answer the question, still the form and look of the opacity will often tell us much about it. If clear-cut—especially if round (circular)—like the typical anterior polar, or the hyaloid remains at the posterior pole, we can be reasonably sure that it will not increase. If there be a uniform haziness, or it shows much of the stellate structure of the lens, the chances are that it will progress.

As we come to the other end of the age scale, we find totally different types and conditions to face. Heredity here plays the leading role, as indeed it probably does also in the senile type.

We find the congenital cataract, the result of intrauterine inflammation or degeneration, also the lamellar and juvenile types—sometimes the result of tetany, perhaps from endocrine disorders—certainly often hereditary, as three successive children in one family seem to demonstrate.

The average lamellar type I believe is best let alone—at least till the patient is old enough to find out how much he can see.

The congenital and juvenile should be operated early, to avoid amblyopia from lack of use; but we should be cautious as to prognosis in these congenital types. With faulty development of the lens, many other intraocular defects may be found; and still worse, many of these children are congenital idiots.

In traumatic cataract, much must depend on the age of the patient, the size of capsular laceration, the involvement of other structures of the eye, rapidity of swelling and resulting tension.

Posterior cortical cataract, as the result of a bruise, can clear up entirely.

In a child or young adult, extensive laceration of the cortex often results in complete absorption of the lens, but after thirty or thirty-five years of age the well-developed nucleus will not absorb, and usually operation must be done if vision is to be restored. But here, too, the question of operation is a debatable one—at least it is to me. If I had a perfectly quiet traumatic cataract, and the other eye was working in comfort, I would let the cataract alone.

I know the advantages of having the cataract out, but I also know that in the best of hands the removal of a traumatic cataract is not always free from danger, and that if ever the time should come when I needed the injured eye, it would not have been lost from lack of use.

Sometimes it is better to bear the ills we have, than to fly to those we know not of.

TREATMENT OF CATARACT.*

By JOS. A. WHITE, M. D., Richmond, Virginia.

Prevention or Arrest of Lens Opacity.

There is no such thing as prevention of cataract. Except in familial cataract, it is impossible to predict who will, or who will not have cataract. It occurs in the healthiest of people, in people who never had a sick day in their lives, and who have never exhibited any organic trouble and who, even after cataract has begun to appear, are still free from any apparent contributing cause after the closest scrutiny by an internist. Also there is no discernible cause in the eye itself. How can we explain this? Whilst there are certain organic diseases which we know have some influence on the development of cataract, the majority of cataract cases are not victims of these diseases.

Arrest of Lens Opacification is Also a Myth.

Dionin, electricity, lens antigen serum, cyanide of mercury injections are vaunted by some authors as reliable agents in its arrest, but as yet no one has satisfactorily demonstrated their utility. Lenticular opacities sometimes spontaneously disappear. I have seen this long before dionin or these other methods were ever heard of. If any of them had been used in such cases the wonderful results of these remedies would be loudly proclaimed by those who had used them, and I am satisfied where such apparent cures have been recorded they were cases of this kind. I have watched so-called incipient cataract for years, where good vision was retained because of its very slow progress, and the cases did not live long enough to come to operation.

Preparation of Patient.

I read now and then of elaborate preparation of patients for weeks, or even months, prior to

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operation, and I often wonder why this is necessary. Apart from an ordinary physical examination to determine the presence of some dyscrasia that might have some influence on the question of operation and the chances of success, I have never seen the necessity for this.

A careful examination of the eye, the light projection, the field, the tension, and the mobility of the pupil, etc., to find any contra-indication to operation, is of course, necessary; and in immature cataract to determine a patient's sensitiveness to lens antigen, is all that is needed. Also, it is my habit to have an examination of the conjunctival secretion to determine the presence of any infective organisms, whether from the conjunctiva itself, or the lachrymal sac; all this a day or two before operation.

Everything being normal the night before the operation, I irrigate the conjunctival sac, cleanse the lids and lashes and fill the eye with bichloride ointment, apply a dressing and bandage and leave it on the eye until it is uncovered on the table.

Some use nitrate of silver solutions. I have never done so as my method has proved satisfactory in preventing post-operative infection. Just before operating, I sometimes inject one-half of 1 per cent solution of novocain into the temple to block the facial, and prevent any trouble from lid pressure. Moreover, in very nervous patients, I give a hypodermic of 1/8 grain of morphine and 1/200 grain of hyoscine.

When the eye is uncovered, I irrigate it again, drop 25 per cent argyrol or 2 per cent mercurochrome in the eye and follow this with cocaine four per cent, repeated every five minutes for three applications. When the eye is ready for operation, I put a drop of adrenalin and a drop of 1 per cent atropine in the eye, then make the section with a conjunctival flap, do a small iridectomy, a peripheral capsulotomy, and press out the nucleus and cortical remnants until I get a black pupil. But, sometimes, if I find difficulty in removing all the cortex, I let it alone to be absorbed, rather than continue pressure, as I may cause striped keratitis or rupture the hyaloid. I do not irrigate the chamber, as I have caused the hyaloid to rupture by overdoing irrigation. Some operators use a suture as a regular thing, either corneal or conjunctival. I have only tried a corneal suture once, regarding it as an unnecessary complication and sometimes a source of danger. The one time I made use of it was in a case of degenerated cataract complicated by a uveitis in a soft eye that gave some promise of sight by removing the lens. When the section was made a stitch was put through the cornea and used to draw the anterior lip of the wound forward to open it for introducing the instruments and I found it worked well. The conjunctival suture I have used several times when conditions would indicate a possible loss of vitreous, so as to close the wound rapidly if this should occur.

The eye is cleaned by warm saline or boric acid solution, filled with sterile vaseline, and pad, bandage and mask applied. The after treatment is simple—just let them alone; twenty-four hours of lying on the back in bed, twenty-four hours on the side, 2 days propped up in bed, two or more days propped up in a chair, and leaving the hospital in seven or eight days. I never look at an eye under four days, because looking at it does no good, and if there is any primary infection (which is almost unknown), we know of no way of saving the eye. If patient will consent to give the time, I always do a preliminary iridectomy at least a month before the extraction, a small coloboma with a corneal section well within the sclero-corneal margin, so that the cut will not puncture the conjunctiva at the edge and spoil my flap in the extraction.

Some of these cases require a secondary needle operation, due to some cortical remains not absorbing, or to wrinkling of the capsule.

This is seemingly a lot of surgery in contradistinction to the removal of the lens in its capsule, but all the same this is what I want done to me when I get cataract.

Cataract makes the patient blind. The object of treatment is to restore sight. Operation is imperative. Whilst there are various methods of doing them, I believe the extracapsular operation offers the best chances of success to the greater number, even if it takes more time and more than one operation at times. The Smith Indian operation, when successful, gives the most perfect result. In fact, any intracapsular operation, whether by the tumbling method, the traction method, or the vacuum method of Barraquer, when successful, gives equally brilliant results. I have tried both the former, never the latter, although I

saw Dr. Barraquer operate on twelve cases in Richmond. The results of his operation did not convince me of its value over my own. These operations are not applicable to all forms of cataract, whereas the extracapsular operation is. If I were to adopt any other method than this, it would be the *traction method*, simply lifting the lens out of the eye with suitable capsule forceps. When this fails, the extracapsular operation can complete the job. The extracapsular operation with a competent and expert operator, and a healthy eye, rarely has a loss of vitreous, which is much more common in the other method and reduces the chances of success. I have no patience with the authors who speak as if vitreous loss is a matter of no moment, when every ophthalmologist with any experience knows it is a serious matter, even if there are no immediate bad results, because it may open the door to various subsequent changes in the eye that will damage it.

Of course, the long experience I have had in treating and operating on cataract, over forty years, and seeing others do it, has made me fully aware of the extraordinary amount of surgery and other injuries an eye can stand, and still be a useful organ. A perfectly classic operation may be a failure; a bungling mess of an operation may be successful in restoring sight. A badly complicated cataract, if the patient has good light perception, ought to be operated on just as a simple case. One of the worst cases I ever did an extraction on was a man named Willis with a staphyloma in one eye and with an old plastic iritis, the iris adherent to the capsule, the pupillary space entirely gone and no anterior chamber, in the other. One of my colleagues tried an iridectomy, got a little marginal hole, and then passed him over to me. I also tried an iridectomy and was lucky enough to get a somewhat larger one down and in, with part of the capsule, as he had no chamber and the lens capsule and iris seemed to be one agglutinated mass. Later I passed a cataract knife behind the iris through the lens and split capsule, iris, and cornea upward with one sweep, removed the nucleus with a spoon and today he has 20/50 vision and reads No. 1.

I simply refer to this case to show that even the most unfavorable cases can recover sight, whilst some of apparently most favorable ones have sometimes an unfortunate outcome.

These remarks about treatment are my own conclusions from what I used to think was a great experience (about 2,000 extractions), but when I read about one man doing over 50,000 extractions, I feel that I am only a very small fish in the cataract pond, and only more or less of a piker compared to Dr. Smith and others with such astounding records.

200 *East Franklin Street.*

DISCUSSION OF DRS. HEDGES' AND WHITE'S PAPERS ON CATARACT.

Dr. Emory Hill, Richmond: I should like to emphasize certain safety measures in cataract extraction. The Van Lint method of injecting the upper branches of the facial nerve does away with spasm of the orbicularis. Lid elevators held by an assistant instead of a speculum are an additional precaution. Subconjunctival injection of cocaine when the iris is to be handled secures deeper anesthesia of this structure.

Dr. Frank M. Hanger, Staunton: I enjoyed very much the papers just read by Dr. Hedges and Dr. White. I always do the two-step operation in my cataract work; that is, a preliminary iridectomy and later the extraction. Dr. White mentioned the importance of carefully disinfecting the eye before a cataract operation, but failed to state that a dacryocystitis precluded the operation, and was accepted by all surgeons as a contraindication.

However, I know a specialist in New York City, who, after disinfecting an eye with a one per cent solution of nitrate of silver, had the temerity to do a cataract extraction, complicated with dacryo-cystitis, and got by with it. Such risks can be taken, in large cities, but, if I should do this in my town and lose an eye, I would be forced to move out. At the first meeting of this Society, in Lynchburg, I read a paper describing an operation, which I had devised, nine years previously, for the cure of dacryocystitis. I had published a similar paper in The Laryngoscope, in 1915. The operation is comparatively easy, and I have had uniform success with it, having cured fifteen of seventeen cases operated. The underlying principle of the operation is the conversion of the nasal duct into a gutter, by cutting away its inner wall up into the lachrymal sac.

I am at a loss to understand why, at least, some of the members of this Society have not adopted it. I actually took the trouble to go to Washington, D. C., and read a paper before the Ophthalmological Society of the District of Columbia, and told the members of that society that I would let any of them have my instruments to be duplicated. As yet, I have heard nothing from them. I presume they are extirpating the lachrymal sac, as they have been doing for years past.

I am thankful to say, I have never extirpated a sac, and do not have to answer for that sin. I regard such a procedure as unwarranted, and an unpardonable piece of surgery, especially since we now have a simple and easy operation for the cure of dacryo-cystitis.

In this connection, I wish to report a case I recently had, a cataract operation complicated with dacryo-cystitis:

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A lady, aged 72 years, who had had the trouble for thirty-five years, and had been treated by two specialists without benefit. As a further complication, she had a maxiliary sinusitis and an ethmoiditis on the same side.

I first drained the antrum and curetted the anterior ethmoidal cells, and after effecting a cure, performed my operation successfully.

A month later, I did an iridectomy, and in six weeks extracted the lens, without the least infection at either operation.

When I dismissed her, she read 20/20 and Jaeger No. 1, and enjoys the distinction of being the only person in this country who has had, as far as I have been able to ascertain, a dacryo-cystitis cured, normal drainage restored into the nose, and a cataract operation done, with a perfect result.

SOME OBSERVATIONS OF THYROID PATIENTS.*

By J. M. EMMETT, M. D., Clifton Forge, Virginia.

When one considers the indecision existing today concerning the question of thyro-toxicosis, no apology need be offered for bringing it again to your attention. The diagnosis, differentiation, and treatment are still problematical. There is, however, a renewed interest in the subject and it is probable that much information may yet come from students working along this line. At present observers are offering you their opinion with the proviso that ultimately they may have to retract all of their teachings. No one is willing to say that he has established the last word in the study of thyroid patients.

Grossly, there are four types of thyroids which we wish to discuss; namely, colloidal, adenomatous (simple non-toxic), adenomatous toxic (secondary hyperthyroidism), and exophthalmic (primary hyperthyroidism). This classification, as you will readily see, does not take into consideration the other and very important diseases of the thyroid gland. However, if we focus our attention on this simple classification, we will not become confused in our discussion.

The colloidal goiter is the accumulation in the alveoli of the cellular secretion—iodo-protein—or colloidal secretion. It is probable that the colloid acts only as a suspension, under normal conditions, for the iodine. This type of goiter requires little attention, unless there is associated an adenomatous development. Rarely does this type of goiter require surgical treatment, unless the patients are definitely suffering from pressure symptoms. The work of Marine and Kimball would seem to indicate that a number of such cases are benefited by the judicious use of iodine. Certainly no disaster is to be anticipated when iodine is used in such patients under the age of twenty. Marine suggests that the first reaction from deficient iodine content is the deposit of colloid, with the development of a diffuse colloidal goiter, which we recognize as the adolescent type of gland. It may be stated, from our present information, that iodine administration is absolutely a safe treatment in children under the age of twenty, who do not have palpable thyroid glands, and that it may even be useful and reasonably safe in children under this age who have small colloidal goiters. However, its administration to older patients, having no palpable enlargement, or small nodules, or large colloidal goiters, may be a procedure to regret. The work initiated at Akron, Ohio, by Marine and Kimball is safe and sane. However, the indiscriminate feeding of iodized table salt as advocated by certain proprietary drug houses for general family use should be condemned, because it is not infrequent that a patient carrying around a supposedly harmless adenoma, may have a resulting secondary hyperthyroidism thereby developed.

The simple adenomas of the thyroid gland may be single or multiple. They are the types of thyroids that Kocher describes as "meaty." They may demand treatment for cosmetic or mechanical reasons, or because of the development of toxic symptoms. It is this group of patients which require much conscientious advice. The tendency of these patients, with non-toxic adenomas, to develop hyperthyroidism increases with age. Even without the development of the classical evidence of hyperthyroidism, the tendency to cardio-vascular disturbance increases each year in goiter patients. The simple adenoma patients requiring treatment are applicable to only one type of treatment and that is surgery. X-ray and radium offer them nothing, and the administration of iodine has only the opportunity of producing in them a disseminated secondary hyperthyroidism.

The toxic adenoma, or secondary hyperthyroidism, is, in its beginning, a benign adenoma. The creative factor, in the production of the hyperthyroidism in the adenomatous goiter, is usually obscure, but probably is associated with unknown changes in the iodine

*Read before the meeting of the Medical Association of the Valley of Virginia, Clifton Forge, Va., June 4, 1925.

intake, inasmuch as it is recognized that the intentional administration of iodine will produce this picture in endemic goiters. After this hyperthyroidism has been produced, the limitation of the iodine intake will not control the functional activity of the adenomatous tissue. After this secondary hyperthyroidism has been produced, it is not believed that the administration of small doses of iodine will produce any exaggeration in symptoms for a limited time. However, its administration for a matter of weeks would prove disastrous. Hence iodine is used by some clinicians to differentiate between primary and secondary hyperthyroidism. There occur a certain number of patients in whom there is great difficulty in differentiating secondary hyperthyroidism from exophthalmic goiters. It has been suggested that iodine in these patients might prove of diagnostic value, providing of course that a careful check is kept upon their clinical course.

It is in the handling of exophthalmic goiters that another procedure of approach has been supplied by Dr. Plummer, who, in June, 1923, reported his preliminary communication before the Association of American Physicians. His findings were based on a careful report of 400 cases suffering from exophthalmic goiters. His study included careful basal metabolic observations and the general clinical course of these patients. Until recently, no effort has been made to differentiate between the clinical adenomatous goiter with secondary hyperthyroidism, and the exophthalmic or primary hyperthyroidism. Dr. Plummer's work is based on the theory that the symptoms resulting from the secondary hyperthyroidism from adenomatous goiters are due to an excessive normal thyroid secretion; whereas, in the exophthalmic type, there is an unknown stimulation of the thyroid gland and the quantity of thyroid secretion in the cells of the body is increased and a great amount of it is imperfect. His efforts are directed towards improving and modifying the abnormal thyroid secretion by the use of iodine, believing that the thyrotoxin molecule was not completely iodized. This belief is in accordance with chemical studies of Kimball.

Clinically Dr. Plummer's work has proven uniformly satisfactory when proper attention is paid to the selection of cases and when iodine is given only to the exophthalmic group. There is an early and a moderately well sustained clinical improvement in a large percentage of these patients, with a perceptible drop in the basal metabolic estimation. The maximum improvement seems to be arrived at in about ten days, after which time there seems to be a gradual subsidence back into the old state of toxemia. Occasionally this improvement is not observed because we are giving too small doses of iodine. Dr. Plummer emphasizes that this treatment for exophthalmic goiter is not curative and it should not be used as such. The reports of its use as a permanent and a substantial control of hyperthyroidism have occurred possibly in patients destined to run spontaneously a short course ending in complete recovery. With the use of iodine, these patients will undoubtedly run a milder and less severe course than might be expected without its administration. Unfortunately we have no information as to what an individual patient, with exophthalmic goiter, will do untreated. The mass of evidence seems to indicate that these patients reach a certain stage of improvement, and, when iodine is withdrawn, retrogress into their old stage of hyperthyroidism. Therefore, we are of the opinion that iodine is principally valuable to prepare patients for operation and to lower the operative mortality.

The question of diagnosis in early primary or secondary hyperthyroidism should receive the best attention we have to offer. It is believed that many cases of autonomic unbalance, or neuro-circulatory asthenia, are yearly subjected to thyroidectomies. Such a mistake is a catastrophe and our patients are frequently rendered hopelessly crippled as a result of our operative intervention. I am aware that ordinarily frank thyro-toxicosis presents, clinically, symptoms that are unmistakable. However, we are frequently confronted with a type of patient in whom the diagnosis of thyroid disease is most difficult. It is well to remember that the tachycardia, or so called neurasthenia, subsides during sleep while the tachycardia of hyperthyroidism continues at this stage—dependent, of course, upon the degree of toxemia. We are of the opinion that the laboratory aid afforded us by the estimation of the basal metabolism is one of the most important determinations of thyroid diseases. There are a limited number of other conditions which will produce an elevated basal meta-

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bolic reading, but generally they are clinically unmistakable, with the possible exception of diseases of the pituitary gland. It might be said that the information supplied us by the basal metabolism, in determining rates of oxidation, is beyond question. It should be recognized that the test is not a simple one and the greatest care and most complete equipment should be available. It is also important to establish definitely that the patient is not under a high tension, and, consequently, not in a basal state. However, when this test is properly carried out, it is our one most important aids in diagnosis. The degree of toxicity is of paramount interest in these cases, especially so when operative procedures are contemplated. We do not wish to appear to minimize the information gained from clinical examinations. However, the pulse rate, the nervous system, the change in blood pressure, and the loss of weight, lack that exactness which is furnished by basal metabolic estimations.

In December, 1924, a symposium on diseases of the thyroid was reported in *Surgical Clinics of North America* from the Deaconess Hospital, in Boston. Considerable attention was given to the pre-operative preparation and the post-operative care of toxic thyroid patients. Too much emphasis cannot be placed upon this phase of thyroid surgery, inasmuch as it is frequently a determining factor in our results. The multiple stage operation was discussed at length, both from the standpoint of testing out the patient's susceptibility to operative trauma and to the proper preparation for the final thyroidectomy. We have frequently felt, in our own clinic, that we were probably doing needlessly many ligations. However, we know of no way to accomplish good results in these patients, except by this method. One very important feature of the report from the Deaconess Hospital was the study of a series of fifty patients suffering from definite cardiac disease, which was directly attributable to thyroid intoxication. They were termed thyro-cardiacs. Thirty-nine of this group of patients were suffering from auricular fibrillations when seen. Nine of these patients gave a history of repeated attacks of auricular fibrillation. One patient in this group, who did not have auricular fibrillations, was suffering from chronic nephritis, and the other had an active tuberculosis with a polyserositis. To this class of patients we have been inclined to offer what we thought was conservative advice, meaning, of course, to treat only the cardiac manifestations symptomatically—no surgical procedure being advised. It is believed today that these patients, with auricular fibrillations, and even with a moderately advanced cardiac decompensation, may be safely subjected to thyroidectomies, and often they are improved to such a degree as to be able to resume their occupations. Within the past five months we have personally observed two partial decompensation cases, following thyroidectomies, who lost their cardiac distress, and who returned to their occupation as operative railroad men. I am sure all of you can visualize patients who have visited you in years gone by, seeking advice for cardiac disease, which you can attribute now to a definite thyroid history.

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Chesapeake and Ohio Railway Hospital.

EUGENICS OR RACE DETERIORATION—WHICH?

By W. A. PLECKER, M. D., Richmond, Va.
State Registrar of Vital Statistics.

I wish to congratulate the Augusta County Medical Society upon the leading position that it has taken in selecting the subject of Eugenics for its symposium on this occasion. Other Medical Societies may have discussed it in this manner, but I know of none.

I wish also to express my appreciation and gratitude for the invitation which you have extended to me to take part in the discussion of this subject, surpassed in importance by none. The conclusions presented to you today are the summing up of the experience and observation of twenty-five years in the gen-

*Read before the Augusta County Medical Association, May 6, 1925, as part of symposium on Eugenics.

eral practice of medicine, followed by nearly thirteen years of unequalled opportunity as State Registrar of Vital Statistics, in which capacity these conclusions have, of necessity, been developed and crystallized.

By the term Eugenics is meant the science of improving stock, whether human or animal. It is based upon the fact that either superior or inferior qualities may be transmitted from parent to child, and, as in animal breeding, the good may be preserved, and the evil eliminated by proper mating.

To secure good results for families, and, through these, for the State or Nation, it is necessary, by education and by law, to prevent the marriage, or illegitimate mating, of feebleminded, epileptic, and hereditarily insane and criminal individuals and those with serious transmissible diseases and defects, or of members of the white race with those of any other race. The preservation of the white race is a true eugenic measure as is well set forth by the author of "White America" who says: "It may readily be seen that the negro problem is a part of the greater problem of heredity. When eugenics seeks to eliminate the unfit and establish the fit it has for its purpose not the betterment of physical types merely, but the establishment of those types of greatest value to progressive civilization.

A race devoid of creative genius is an unfit type so far as progress in civilization is concerned and is a matter of concern for the eugenist. Those who seek to maintain the white race in its purity within the United States are working in harmony with the ideals of eugenics. Asiatic exclusion and negro repatriation are expressions of the eugenic ideal."*

Education of the young, in particular, and for this end, of their parents and teachers also, is necessary to secure the best and most positive eugenic results of correct selection in marriage. The science of Eugenics has, perhaps, not advanced sufficiently to enable us to lay down for the public absolute rules of guidance. At present we may only point out and prevent the danger from the increase of such defectives as have been referred to above, giving out, in a general way only, information for the guidance of those who would enter thoughtfully into the serious and important relation of marriage.

Wiggam says: "At least three-fourths of the misery in the world is due to the simple fact that the wrong people got married. Marriage, when children are expected, should be a privilege bestowed by society solely upon the fit. Parentage is not a natural right, and it should be withheld from the unfit."

"By applying one-tenth as much science in mating human beings as we do in mating animals, we would probably add more to the health and happiness of our children and grandchildren than can be done by all the medical discoveries of the next hundred years."*

Divorces

One of the subjects assigned for study to our office is that of the prevalence and causes of divorces in Virginia. The first cause in real importance, though not first in actual count, is unfaithfulness to the marriage vow by one, or possibly both of the partners. This cause, though not most frequently stated, on account, perhaps, of the difficulty of proof, is the underlying one, in a large per cent of the most frequently stated cause, desertion.

These two together, constitute nearly 97 per cent of the total number, cruelty being the third with 2 per cent.

In nearly 62 per cent the husband is the guilty party.

When we consider that existing habits are not easily broken, it might be possible to calculate with reasonable certainty that a man of dissolute habits will remain faithful to his mate only so long as he has no inducements or opportunity to act otherwise.

Immoral tendency is a matter of inheritance, and is either increased or retarded by evil or good environment.

With the knowledge of the family history of an individual, together with his own reputation or known habits, which may usually be learned, if not already known, it is possible to apply the rules of eugenics and estimate with reasonable certainty the likelihood of the individual with whom marriage is contemplated remaining true to his marriage vows, and of his children inheriting high or low standards of virtue.

As the breaking up of a home by divorce is

*White America, by Earnest Sevier Cox, the White American Society, Richmond, Va.

*The Fruit of the Family Tree, by Albert Edw. Wiggam, Bobbs Merrill Company, Indianapolis, Ind.

XUM

a serious matter to the State as well as to those whose happiness is directly involved, this question should receive more serious consideration from a preventive standpoint.

Transmissible Disease and Physical and Mental Defects

If it were possible for our office to secure more than fragmentary statistics as to the immense importance of syphilis as a destroyer of human usefulness and life, we could give out to the people of the State information that would be startling in the extreme.

This knowledge has been amply supplied by the records of hospitals and the private work of careful physicians.

Dr. Herman N. Bundesen, Health Commissioner of Chicago, in a chastely written pamphlet, "Everybody's Problem," gives out information which should be broadcast throughout the land. He says: "This is a warning, for at the present time, despite vigorous measures of repression, a contagious disease exists and the records show that already many persons have been or are infected. It has attacked practically half the boys under thirty years of age, a large number of young women, and many little babies. In the hospitals there are many cases, but the facts have been handled with such suppression of publicity that little has leaked out to arouse the people.

"I believe it is time that the public should be informed. And I hope that each householder who receives this official warning will co-operate whole-heartedly with me in order to protect his own family.

"There are cases in your own block or perhaps in your own apartment building, or boarding house. At your club, at your restaurant, at your office there are people who come from homes touched by disease.

"Unless your co-operation can be secured, there will be more victims of this contagion within a year than were numbered in the United States casualty list during the entire war in France."

Dr. Bundesen reproduces in his bulletin a striking chart prepared by the American Social Hygiene Association of New York in 1919, in which syphilis, inclusive of all deaths under other classifications that should be ascribed to syphilis, is shown as the greatest of Death's agencies.

This chart places the death-rate from syphilis per 100,000 of population as 222, while tuberculosis is rated second with 141.6.

While it is believed that this rate, though true for the larger cities, is in excess of our rural Virginia rate, yet our office cannot present any estimate based upon our own statistics to show that it is far wrong.

While it is not claimed that syphilis is handed down from former ancestors as a part of the germ-cells which carry heredity, it is true that the spirochaetes causing the disease in the child before its birth, are passed on from its mother, the child thus acquiring the disease at the very beginning of its life.

Forty years or more ago, before Koch's discovery of the tubercle bacillus, it was the universal belief that tuberculosis was an inherited disease. The result of that belief was that it was considered unwise to marry into a consumptive family.

As the result of Koch's discovery, the encouraging message was sent abroad that tuberculosis is not inheritable, but that it is acquired by direct individual infection.

While this message is undoubtedly true and while many do escape tuberculosis whose parents, grandparents or other relatives were victims of it, yet we must not overlook the fact that some soils are much better adapted to the growth of the bacillus than others, and that this susceptibility is inherited, passed on from generation to generation in the germ plasm.

We recently received a letter from an old gentleman telling us that all of his relatives had been remarkably free from disease and that all had lived to a good old age, the need of physicians being unknown in his family.

There is nothing remarkable in this statement when we remember that such a condition is inherited, and should be treasured as the family's most valued possession. Such heritage passed on to a child is of far greater worth than a fortune that may be counted in six or even in seven figures. To pass on to a child such a heritage just one thing is essential, and that is entirely within the control of his parents.

This essential is that the prospective father and mother who themselves come from such sturdy stock, use their heads as well as their hearts, and see that they do not make the fatal mistake of marrying into a family of weaklings, whether that weakness be physical, men-

tal or moral. Were there enough such mates to go around, and could each be so fortunate as to find one of that sort, then with proper environments we could produce a nation of stalwarts prepared for any and all emergencies.

If, however, one parent comes from such stock and the other from a family of the opposite type, one child may inherit the characteristics of the father and the other of the mother. These children may again either improve this stock and preserve the best half of their heritage for their children, or they may still further reduce their valued possession transmitted by the sturdy parent, by either a wise or an unwise choice of mates.

It should be a matter of great concern to the State or Nation as to what proportion of the population is of the highest type, what proportion is of the degenerate class, and again what proportion belongs to the third or middle class, which after all, constitute the majority of its citizenship.

There are other diseases or conditions, however, more dreadful than those referred to, which we know to be inheritable, passed on from remote generations, and sure to go on forever if no break occurs by accident, or by design of the State.

These are feeble-mindedness, epilepsy, certain forms of insanity, and criminal and immoral traits of character. To these may be added a nervous weakness or irritability, manifest in all the ordinary acts of life or developed by worry and strain, which would be resisted by a person of greater inherited stability. Soldiers of this type furnished our "shell-shock" victims. Neurasthenia and other forms of nervous instability, though directly induced by environment, really have their origin in the original germ plasm passed down from the parents.

The length of this paper does not permit the further discussion of this subject now already familiar to all intelligent persons, further than to say that State-wide education in eugenics and the general practice of common sense and care in the selection of marriage mates by our young people, offers the best opportunity we possess for race improvement.

Caring for our great army of derelicts, in insane asylums, epileptic colonies, reformatories, jails, alms-houses and penitentiaries, all of which is necessary for the protection of the community, constitutes one of the greatest burdens borne by the tax-payers of the State. This burden is, perhaps, more than doubled by the still larger body, as yet on the outside, who are increasing their kind at a fearful rate.

Why, therefore, should our legislature delay in the adoption of other measures offering reasonable hope of checking the increase of these degenerates, thus taking further practical steps for its own protection, and for the improvement of the race stock? We must not forget that the 1924 Virginia legislature led the world in its passage of the Racial Integrity law, and placed itself in the forefront with the few States requiring the sterilization of those unfit for parenthood.

Illegitimate Births

This subject is considered here not strictly as an eugenical one, but because it constitutes one of the sorrows of our office, and because it is in a great measure an index to the state of morals of the young people of our State. The fact that it is a growing evil we take to mean that the moral fibre of our people is becoming weaker, and that the former high moral standard of our young women, as well as of our young men, is breaking down. Whether due to an actual decline in the character of germ cells from an unwise crossing of lower types with those that dominated the civilization of Virginia prior to the War between the States, or whether due to changed environments, or in part to both, we cannot answer with certainty. In 1917 there were 3,554 births out of wedlock, or a rate of 53.5 per 1,000 births. These had increased in 1923 to 3,680, with a rate of 56.9.

While it is true than an overwhelming proportion of these births are colored, it is a fact that the white rate is actually increasing more rapidly, and that Virginia holds the unenviable position of first of the registration States in its white illegitimate birth-rate. We do not accept the flattering explanation which has been suggested, that our statistics on this point are nearest complete.

We find that in this number are included teachers, nurses, stenographers and others of the higher class workers, indicating that the evil is not confined to the lower strata of society.

When we consider the small proportion of delinquent acts that reach the stage of final

XUM

record in our office, the situation is really appalling, and is almost surely worse than a generation ago, though we have no statistics to prove it.

That the last line of the defense of our homes, the purity of our young women, is yielding, is indicated not only by our own statistics, but by reports from different, but trustworthy sources.

The remedy is evidently, so far as environment will go, the exercise of greater parental control of our young girls, and of boys as well. We would do well to go back to the safer English custom of restraint and chaperons.

Much may be hoped for through judicious education in high schools and colleges. The young minds should have impressed upon them the necessity for race betterment, which can be attained only through a high standard of individual and family life. They should be shown the danger of marriage with those whose conduct indicates that they are members of families in process of degeneration, even though they may possess wealth and a veneering of superficial politeness.

True depth of character and honesty of purpose should be demanded.

Race Intermixture

This phase of the subject is discussed last, as it represents the climax of eugenic breakdown, which when it has occurred can by no possibility be corrected.

The stern hand of the law may take in charge the feeble-minded, the insane by inheritance, the criminal, the immoral and the physically unfit and say that they must by imprisonment or sterilization be prevented from transmitting their taint to posterity. It might be imagined that society may reach the point when such efforts meet with complete success, but we cannot imagine the possibility of undoing race mixture and of ever restoring either race to its former purity when that has occurred. Neither is there any known method of preventing the increase of this intermixture when it is once well on the way as it is in Virginia and in large parts of our country, both North and South.

This intermixture, which began soon after the negro was introduced into this country in 1619, has gone on and on until now it has reached serious proportions, and there are thousands in our State who are constituting themselves a third race, with sub-division of the middle one based upon shades of color and texture of hair.

This is best illustrated by citing as an example the case of a woman of light color who with her black husband visited one of our Richmond colored churches. The usher politely invited her to go up near the front, but suggested that her companion remain in the rear. A quick glance revealed the fact that the congregation had been graded off by color, the light ones at the front, the medium in the middle, with the black in the rear. The couple left, and the woman has reported to the family by which she is employed, that the same conditions exists, not only in the churches, but in colored society in general.

This unfortunate third race created by the sins of the more responsible white, as well as the too-willing blacks, is now in the position of being rejected by the whites, while they themselves reject the blacks.

Many of these by the constant infusion of new white blood, illegitimately, and by guarding against further black admixture, are gradually, generation after generation, growing whiter and whiter, until individually, they find themselves able to break across and intermarry into the white race.

This has in the past been legally possible through the weakness of the law of Virginia, as in practically all of the Southern States, permitting a person of one-sixteenth negro blood being classed as white. In the north, twenty States, including the District of Columbia, have absolutely no barrier, in some no record even being kept on marriage licenses as to color.

The new Racial Integrity law of Virginia, which forbids the intermarriage of a white person with one of any trace of colored blood has called a halt and is staying the progress of intermarriage, but has spurred to open defiance a number of large groups, in all nearly 2,000, of those who claim a trace of Indian blood.

The old birth, death and marriage records of our office reaching back to 1853, show that in practically every case as far as we have investigated, the claim of Indian origin, except remotely in some cases, is unfounded. The correctness of these records has been confirmed by numbers of old citizens with knowledge handed down in the family for two or

three generations. These have either written us signed statements, or visited our office and submitted to stenographic interviews.

These more recent records are in exact accord with statements made in Howe's history of Virginia in 1845, and in the U. S. Bureau of Ethnology reports.

We are gradually confirming these historic statements by study of individual families as we have the time, and the information to start upon, and are discovering just where additional negro blood has been introduced since 1853 into the group containing the greatest amount of Indian blood, as well as into the others.

Even with our present knowledge, which we are constantly adding to, we feel justified in agreeing to the historic statements that there are probably no native born Virginia Indians free from Negro intermixture, and that there are no native Indians who are under the one-sixteenth Indian exception of our Racial Integrity law entitled to intermarry with white people, regardless of the amount of additional white blood which they may have secured.

These so-called "Indian" descendants, of "free negroes" usually, have not only been exercising quite freely the privilege of intermarrying with whites, but have been exercising the additional privilege of riding in white coaches and street cars and attending white schools, not allowed to others of negro-white composition, who make no claim to being Indian.

It is necessary for our law to be amended by the next legislature repealing the Indian exception. That will then automatically relieve our office of the fierce struggle we have been compelled to maintain to disprove the claims of these self-styled Indians.

Physicians, usually, are faithfully endeavoring to secure accurate statements as to the color of the parents in reporting births.

The saddest feature of this situation is the fact that a considerable number of degenerate white women are giving birth to mulatto children. The facts in the office of the Bureau of Vital Statistics are really too sickening to discuss.

This is a time when the practice of ordinary eugenic measures is too slow and too weak. The State must strengthen its present law and enact another to prevent if possible some of the illegitimate intermixture, by making the father responsible for the expense of the mother's confinement and for the support of the child till fourteen years of age.

It may not be generally known that there is now a law with a heavy penalty forbidding illegal relations of persons who cannot legally marry. This law, however, needs strengthening and enforcement.

The situation is a serious one and demands rigorous methods of control. One of the great needs is county and city officers with vision and courage to enforce our laws, together with fearless citizens to back them up and testify to what they know.

This country is the last stronghold of the white race. When we succumb and when our American civilization is destroyed by racial amalgamation there is no other to take its place. This is a situation in which there can be no compromise. There is no place for maudlin sympathy for these unfortunate people. It is for the white race to decide what its composition shall be, and to say to the others "you shall not pass."

If the State would make sufficient appropriation to employ capable assistants, and pay for the necessary postage and printing, it would be possible for the Bureau of Vital Statistics to build upon its present foundation of records, old and new, and by drawing upon those of the various State institutions, if adequately preserved, to develop a work of real eugenic value. We are able already to make invaluable use of our old birth, death and marriage records, and rarely search them without success, to establish the race of an individual or family, when supplied with sufficient information as to names and ages.

With all sources of information made available, it would be possible then by a system of propaganda and intensive education, especially in the schools, so to raise the ideals of the general public that it would desire better things and would apply to our Bureau for facts and advice before entering upon matrimony, and assuming the greatest of all responsibilities, that of raising new citizens. These would then by such means be more likely to be a blessing and a power to the State than a curse and hindrance. The raising of a large family of high type children should be looked upon as a special privilege and blessing.

Since the State needs all of the best class of citizens it can secure, and since modern birth

control propaganda is successful in reaching only this more thoughtful class, and not the feebleminded and other undesirables who usually bear families of eight to twelve children, such propaganda, and the sale of the means of accomplishment, should be absolutely prohibited under heavy penalty.

May it not be possible that in this little gathering of Augusta County physicians there may develop in this eugenic symposium a beginning that will grow into greater things, which shall even rival in value that other great gift to the world, Woodrow Wilson.

This great Virginian himself, was descended from a long line of Presbyterian ministers, and is an outstanding example of eugenic selection in the production of the highest type of Americans.

THE DIVINE PLAN OF RACIAL INTEGRITY.*

By REV. W. E. DAVIS, Staunton, Va.
Pastor Second Presbyterian Church.

The purpose of this discussion should be clearly understood. No attempt is made to demonstrate a divine plan of Racial Integrity either from ethnological, physiological, or psychical evidences. Such evidences exist in abundance, but to the more thoroughly informed student of history, or the specialist in the fields of physical and psychic phenomena will be left the task of presenting them. Our observations have been confined entirely to the field of revealed religion, or, to be more specific, to the Holy Scriptures as they are generally accepted among nominally Christian communities. The Scriptures have been examined with the quest in mind of discovering whether the Author of Revelation disclosed a purpose of racial purity in the Divine guidance of certain race members of the human family.

One distinction should be clearly observed, and that is between nationalities and races. When the latter term is employed it sometimes denotes only national groupings and at other times refers correctly to the three great groupings commonly known as the Caucasian, Mongolian, and Ethiopian. When Edwin A. Grosvenor, LL.D., declares "Racial purity anywhere in Europe is a figment of the imagination," he refers evidently to national purity and not to purity of race. Revelation shows that this threefold division which is accepted today had its origin in the family of Noah following the flood, and the careful student of history will find abundant verification of the prophesy made by Noah concerning the descendants of his three sons. This possible explanation of the threefold division of the human family places that division at the very fountain head, and subsequent Divine injunctions against the intermarriage of nationalities were based sometimes upon racial distinctions. The words of the great apostle to the Gentile world spoken on Mars Hill, Athens, "God hath made of one blood all nations that dwell upon the face of the earth, and hath before determined their appointed seasons, and the bounds of their habitations" is not only "the profoundest word ever uttered in explanation of human history," but is verification of the racial origins in the one man, Noah, and of the divine institution of the lines of cleavage.

If, according to Revelation, there was Divine separation of the nations, and a world-wide distribution after the confusion at Babel, was there any other effort other than geographical allocation to preserve the racial lines? The course of Revelation after the great separation is confined to the fortunes of one family and the rather insignificant nation, speaking politically, that grew out of that family. This nation, the Hebrew, sprang from the eldest son of Noah, and belongs to the second great division, the Semitic race.

The members of the patriarchial family were very jealous lest the sons of the house should intermarry with the native stock of Palestine, and intermarriage within the family itself was practiced to keep the race stream pure. While the Divine hand does not appear on the surface in this, there is the inference that this precaution was adopted through Divine influence. The descent of the Hebrews into Egypt was as a family of seventy members, whence it came out a fairly numerous people. For four hundred and thirty years they had preserved their racial purity and had not been absorbed by the political and social forces of Egypt. Of course, the preservation of the pure Hebrew stock during these years of practical bondage was due in part to the separate residence in Goshen, but there seemed to have been an operation of a higher law that

*Read before the Augusta County Medical Association, May 6, 1925, as part of symposium on Eugenics.

accounts for this remarkable phenomenon of human history.

As racially distinct as was the family of Jacob, it appears that so distinct were the Hebrews upon their departure from Egypt. The record of Revelation indicates that just as purity of Israel's stock had been guarded in Egypt, so was it to be preserved in their new home, Canaan. While still en route to this destination of their pilgrimage, their great lawgiver, Moses, speaking with divine authority, pronounced the edict forbidding them to intermarry with the tribes of Canaan. This law seems to have had equal authority with the other laws which separated the Hebrews and made them the chosen channel of further divine Revelation. An examination of the origins of the various tribes that surrounded the Hebrews in Canaan reveals the fact that the edict of separation imposed upon the Hebrews was not entirely based upon religious grounds. The corrupting influence of heathen religion appears on the surface as the cause of Israel's isolation, but an examination of Genesis, the tenth chapter, shows that the tribes of Canaan were descended from the second son of Noah and were members of another racial branch. It is of interest to note that the most modern discoveries of archaeology confirm the opinion that both the Egyptians and the Canaanites were racially distinct from the Hebrews. These discoveries indicate that Egyptian and Hittite civilizations were originally Ethiopian, and the Semitic-Hebrews, therefore, were of a different race.

Following the settlement of the land and the turning of the Hebrews to peaceful pursuits, there seems to have been a disregard of the provision forbidding intermarriage with the tribes of Canaan, and the attendant religious corruption was not the only evil result. The judges who were the divine spokesmen for the period pled for a reform in this particular first and predicted their utter failure should amalgamation with the Hittite descendants continue. Their efforts met with some success and at the close of the three hundred year period when the national consciousness of Israel first began to assert itself, there seems to have been generally a preservation of the racial stock.

That the succeeding period of the history of the Hebrews was not marked by faithful allegiance to racial distinctness is shown in the fact that their royal family intermarried with members of other races. This, of course, had its resultant effects upon the general populace and Revelation shows that the greatest disaster befell both the royal house and the nation in general because of these unholy alliances. The prophetic spokesmen of the period are frank in declaring that Israel's most illustrious king made a failure in his marriage with heathen women. His alliances not only corrupted the religion of Israel, but resulted really in the division of the nation. The close of the period of the kings was marked by the invasion of Semitic forces from the East and the capture and banishment of both divisions of the nation, the northern in 722 B. C. and the southern in 586 B. C. The Chronicler of the period is faithful to declare that one cause among others of the national disaster was the fact of intermarrige with other races.

The re-establishment of the Hebrew nation in Jerusalem with the permission and assistance of the great conqueror, Cyrus, presents us with another strange historical phenomenon. The greatest divine spokesman and leader of this period was undoubtedly Ezra and second to him, Nehemiah. It is striking to find that both of these leaders in the rehabilitation of the country and the re-establishment of the Hebrew religion demanded separation of the Israelites and the re-observance of racial purity among them. Their measures seem even harsh and unjust to us today, but marriage relations were compelled to be broken that had been established between the Hebrews left in the land and their heathen neighbors.

The struggles of Israel during the subsequent centuries were more for the perpetuation of national existence than of racial distinctness. However, it must be said to their praise that so pure was the stream of the race kept that when the Supreme Man of all the races was to appear, He came of a family whose pure Hebrew genealogy could clearly be given reaching back to the father of the nation itself. This unique man in whom the members of all nationalities were to find an ideal and a counterpart could have said of himself even as his greatest exponent said of himself. "I am a Hebrew of the Hebrews:" the product of practically pure racial lineage.

And now may we review the evidence of a Divine plan of racial integrity or purity. Divine revelation accounts for the threefold

XUM

racial grouping that we generally recognize today and specifically testifies to the latest teachings of science that in blood they are one. Further it accounts for the division and distribution geographically according to the linguistic characteristics, a method of classification so popular among ethnologists. Again, in order to furnish the world with the revelation of ethical religion, a nation was reared and from the time of its inception until the fulfillment of its mission carefully guarded against intermarriage with other nationalities that were racially different. Finally, when divinity itself came to be incarnated in human nature, it was *in* a personality, with a genealogy proving racial purity for generations and centuries, that this incarnation took place. These are the evidences that revealed religion furnished a Divine plan of racial purity.

EUGENICS IN RELATION TO THE INSANE, THE EPILEPTIC, THE FEEBLE-MINDED AND RACE BLENDING.*

By J. S. DEJARNETTE, M. D., Staunton, Va.
Superintendent Western State Hospital.

Genesis or reproduction is an inherent power and urge of every normal adult, being from the primordial protoplasm to the highest organized creature. The law of the jungle tends to the survival of the fittest. The weaklings fall by the wayside before maturity, or are shoved aside or killed by the stronger males during sexual excitement, and so the "fit" survive.

Inherited tendencies in domesticated animals must be watched for in order that desirable qualities may be developed and the undesirable eliminated. Again in the vegetable kingdom we are guided by our knowledge of the laws of inheritance. If we wish good fruits and vegetables we must sow good seed.

To attempt to prove the importance of good seed and well bred animals would be insisting on an obvious fact to 90 per cent of our people.

Alas, it is only in human breeding that the laws of heredity are almost entirely ignored and dysgenics run riot. The insane, epileptics, alcoholics, syphilitics and feebleminded are allowed to reproduce with but little restraint, and as far as man's genesis is concerned the worst is as good as the best. When worked out in the sweet pea family by crossing reds and white, Mendel's Law showed that the type of one parent or the other is predominant in the offspring, though the offspring has the power to transmit the quality of the parent which it does not resemble. The characteristics shown are dominant and the latent characteristics which can be reproduced are recessive, e. g., a red pea crossed on a white produces either a red or white pea; this offspring will produce 3-4 like one parent and 1-4 recessive.

If two of the recessives are bred together they continue to breed recessive constantly. If the dominant members of the third generation are bred together they divide themselves into two orders; one-third of these members produce dominant offspring, and two-thirds are true hybrids, showing a mixed character, and each subsequent generation from them shows the same proportion of pure dominants, pure recessives and hybrids.

So far as it has been possible to make observations this law holds fairly true in the animal kingdom. Mendel's Law is practically in its infancy, having received little attention until after Mendel's death in 1890, but it has started our feet in the right direction "if we but follow after," and persistently strive to free society and the State from the dependent classes of feebleminded, criminal, epileptic, syphilitic and insane, by using the law given us by him.

The feebleminded are a great menace to our citizenship. We have probably 12,000 or more in our State, and it has been estimated that one feebleminded woman will bear three children to the college graduate's one.

A family which cannot support itself on account of its mentality should not be allowed to reproduce.

There is said to be one idiot to every 2,500 of our population, but the idiot rarely reproduces and is consequently self-eliminative.

A survey should be made of the State and a public record kept as to its dependents and especially as to its feebleminded children and children of the insane and epileptic. These records would be of untold assistance when applications are made for marriage licenses and to our criminal courts, as the feebleminded are largely in the majority among our criminals. About 70 per cent of feeblemindedness can be traced to heredity. When one parent is feebleminded it approximately follows Mendel's Law; when both parents are feebleminded

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by heredity all offspring are feebleminded. The feebleminded from disease and traumatism during birth and infancy are not liable to produce feeblemindedness in their offspring.

Inherited syphilis is not strictly speaking an inherited brain defect, but the result of spirochaetes at work.

I believe we should have an eugenic society in every county and city in the State with a secretary devoting his entire time to securing data as to the dysgenic situations in his territory, keeping records, examining school children as to mentality, and lecturing on eugenics before the students of the high schools.

Courses in eugenics should be required in all colleges as the students and teachers (a most desirable class, under the present system) are practically sterilized, especially when compared with the feebleminded and colored races.

Cox says we are in very much more danger from the tar brush and the mulatto brother-in-law than from negro insurrection.

Race Blending

Miscegenation and amalgamation has been the inevitable end in all history where two or more races have dwelt in the same country and this has been the history of the three original races, the white, yellow and black when dwelling in close contact. E. S. Cox in his book "White America" says that the white race has made civilization, that the yellow race when left to itself can hardly maintain a civilization, and that the black race cannot continue it.

He holds that the advancement of the yellow and black races is due to contact with the white; therefore, it is all important that the white race be kept pure in order to advance civilization, and it is equally important for the yellow and black races since their only advance must come from the lift of the white. If the white race is deteriorated by miscegenation then the advance of civilization will cease.

The deteriorating effects of miscegenation are to be found in the history of the Egyptians. This white race maintained a high degree of civilization until its mixture with yellow-black blood, black predominating. From this mixture was formed a white-yellow-black mongrel race, and in the twenty-fifth dynasty, it was ruled by Taharka, a mulatto king.

India has a similar history. Beginning with a white ruling class she foresaw the danger of a mongrel race, and made the splendid laws to prevent this calamity. These iron-bound class laws coupled with religion would possibly have prevented the blending of the races, but the curse of illegitimacy broke the castes, and today India is a white-yellow-black race.

Other civilizations that have deteriorated by colored contact are those of Abyssinia, Nigeria, Uganda, Mashonaland, Babylonia, Persia, Cambodia, Ceylon, Java, New Zealand, Northern China, Korea, Japan, Yucatan, Peru and Hayti.

The above statements are quoted from E. S. Cox's "White America," a wonderfully interesting book.

The amalgamation continues even though the first crossings may be few, since the mongrels continue to cross with each other and so the melting pot is kept boiling in spite of laws forbidding such unions. These unions made legal blacken the white race, while illegal unions whiten the black race. It is best for all and should be the object of each race to be kept pure.

Suggestions

Segregation of the races is the only way to keep each race pure. Much has been written on the subject with little or no effect; illegitimacy continues to mix the blood streams and make the mongrel man.

Our immigration laws should be made more and more stringent, admitting only the most desirable of our predominant race. Australia admits no colored races to settle in her territory.

Parenthood should be encouraged among those with best hereditary traits, and discouraged among defectives by segregation and sterilization. Wages should be regulated according to the number of children and the mental quality of parents.

Registration of family pedigrees, traits, etc., should be required, for certainly we should know as much about our proposed husbands and wives as we do about our cattle and dogs. The study of matings with classified records might be helpful in giving us a better race.

Competition among the children in various counties in growing crops and breeding animals for prizes offered on best products and essays on methods would tend to make them more careful in selecting their own mates in later years. An exhibit of Mendel's theory of

inheritance with the blooming peas, properly labeled at the County and State fairs, would be instructive, and demonstrations with paper flowers could be made very impressive and would be inexpensive.

Birth selection and control is the ideal for eugenics. Excessive breeding caused Malthus to weep over the future as he saw a starving world by over-population.

Virginia passed a sterilization law in 1924 which is now being tested by the courts. This law deals with the insane, epileptic and feeble-minded confined in the State Institutions, and when it becomes operative, it will sever the black thread of inheritance, give many segregated people their liberty and save untold suffering, crime and expense in the years to come.

Allow me to quote a few verses of my own composition suggested by Mendel's Law:

Mendel's Law

Oh, why are you men so foolish—
You breeders who breed our men
Let the fools, the weaklings and crazy
Keep breeding and breeding again?
The criminal, deformed, and the misfit,
Dependent, diseased, and the rest—
As we breed the human family
The worst is as good as the best.

Go to the home of some farmer,
Look through his barns and sheds,
Look at his horses and cattle,
Even his hogs are thoroughbreds;
Then look at his stamp on his children,
Lowbrowed with the monkey jaw,
Ape-handed, and silly, and foolish—
Bred true to Mendel's law.

Go to some homes in the village,
Look at the garden beds,
The cabbage, the lettuce and turnips
Even the beets are thoroughbreds;
Then look at the many children
With hands like the monkey's paw,
Bowlegged, flatheaded, and foolish—
Bred true to Mendel's law.

This is the law of Mendel,
And often he makes it plain,
Defectives will breed defectives
And the insane breed insane.
Oh, why do we allow these people
To breed back to the monkey's nest,
To increase our country's burdens
When we should breed from the good and the best.

Oh, you wise men, take up the burden
And make this your loudest creed,
Sterilize the misfits promptly—
All not fit to breed.
Then our race will be strengthened and bettered,
And our men and our women be blest,
Not apish, repulsive and foolish,
For we should breed from the good and the best.

DIPHTHERIA.*

With Special Reference to Some Peculiarities of the Disease in Infancy and Childhood.

By WM. B. McILWAINE, M. D., Petersburg, Va.

The disease diphtheria, in spite of the advances made in the past few years, still takes its toll among our children. Why is this? Theoretically, with the discovery of the Schick Test and the use of toxin-antitoxin in early childhood, we should be able to immunize the coming generation so that diphtheria will be as rare a disease as smallpox. This is our hope and our aim, and its accomplishment depends largely upon three factors, (1) the convincing of the medical profession of the efficacy of these methods, (2) the requirement of compulsory tests, and (3), municipal or state administration of toxin-antitoxin. I shall not go into these more fully at this time, as I wish to make the disease and its peculiarities the subject of this paper. There is absolutely no need of rehearsing the history or etiology of this disease, nor to describe its usual clinical course. Every mother knows about the "white spots on her child's throat," and thinks at once of diphtheria. When the child begins to have difficult breathing, all of our profession and most of the laity think of laryngeal diphtheria, or the so-called membranous croup. If the physician were called in time I doubt very much that a single case of faucial or laryngeal diphtheria would be lost from the direct disease itself, but it is some of the rarer forms of the disease, some of the peculiar places where the bacillus finds lodgment and works its havoc without being recognized until too late, that I would bring to your attention today.

The first of these is nasal diphtheria. As the name implies, in this disease the Klebs-Loffler bacillus finds lodgment in the mucous membrane of the anterior nares and grows there. The manifestations of the disease are, (1), persistent nasal discharge, (2) generally blood tinged discharge, (3) excoriation of the upper lip, (4) diphtheria bacillus found on culture.

The disease runs a chronic course for several weeks and does not appear to be very virulent, but, at times, palatal and other paralyses occur. I have seen only one complication of this kind in the past three years, and it was due to the late administration of antitoxin, or rather to the toxins of the disease which

*Read before the Southside Virginia Medical Association, 1924.

had not been controlled by the early administration of antitoxin.

A very interesting, and to my mind important, phase of nasal diphtheria is the so-called diphtheria of the new-born. Much controversy has been waged concerning the pathogenicity of the bacillus in the nose of the newly born. Probably the most extensive work was done by Kritzler, at Giessen, who examined 451 new-born infants for nasal diphtheria. In 130 cases clinical symptoms were present. Of these, 34 per cent were positive for diphtheria, 10 per cent showed atypical diphtheria, and 56 per cent were negative. Of the positive cases two died, of the negative cases seven died. These figures seem to show as this author says the unimportance of the so-called nasal diphtheria of the new-born. Now, it is well known that the infant has a certain amount of protection from the mother, but just how certain no one knows. Statistics given by Dr. Kerley are 7 per cent of positive Schick Test in the new-born. By this we know that some may be susceptible to the disease. If 7 per cent of new-born infants have no protection, we should be on the lookout for the disease in every new-born infant who shows any symptoms, for it may be in the 7 per cent of unprotected.

In the past two years I have seen four cases of nasal diphtheria in infants under three months. One of two and a half months, one of one month, one of three weeks, and one of two weeks. The first, aged two and a half months, had a violent diarrhea, which was controlled by treatment, but the child developed a nasal discharge excoriating and blood tinged. On culture the diphtheria bacillus was found. This was overlooked by the attendants until too late and the child died of typical heart collapse. Case two developed difficulty in breathing, snuffles and mouth breathing with slight nasal discharge not bloody and only slightly excoriating. I saw the infant at the end of the first month. A very questionable membrane was seen in the nose, cultures were taken, which were positive for diphtheria. Antitoxin was given and infant recovered, but had a paralysis of the palate and had to be tube-fed for a while, finally it made a complete recovery. Case three was seen in consultation at the end of the second week. The infant could not nurse on account of nasal stoppage. It was apparently very ill, temperature 103°, rapid pulse and visible membrane in the nasal cavity. Diphtheria was suspected and as the umbilical cord was in a very questionable condition, the infant was brought to the hospital. A direct smear revealed the diphtheria bacillus in the nasal cavity. Antitoxin was administered, the cord received vigorous antiseptic treatment, argyrol was instilled into the eyes and nasal cavities and the infant entirely recovered.

Case four was seen in consultation at the end of the third week. For two weeks it had suffered with snuffles, and a serous blood tinged, excoriating nasal discharge. The infant looked toxic, with a slightly elevated temperature, and nursed badly on account of the stoppage in the nose. A culture revealed the diphtheria bacillus. Antitoxin with argyrol instilled in the eyes and nostrils controlled the disease in three days.

These cases are reported to bring to our attention the fact that there is such a clinical entity as nasal diphtheria in the newly born, with definite symptoms and signs, which is cured by the administration of antitoxin. Personally, I believe all of these infants would have died unless the disease had been recognized and antitoxin given, for even though they might possibly have overcome the toxin of the diphtheria, yet they were rapidly going into marasmus from being unable to suckle properly, due to nasal stoppage. I shall always hereafter culture all suspicious cases of difficult nasal breathing in the new-born and administer antitoxin if the Klebs-Loffler bacillus is found.

The second peculiar place for the diphtheria bacillus to lodge and grow with rapidly toxic results is the post nasal space. This space, warm, dark and filled with blood vessels from adenoid tissues, is an ideal breeding place for the bacillus, and, due to the vascularity, absorption is rapid. Textbooks are far too inadequate on the subject of diphtheria in the post nasal space. Personally, I have seen four cases in the past year. One was uncomplicated post nasal space diphtheria. The patient had 5,000 units of antitoxin but succumbed to the virulence of the disease before more could be administered. In this case the child had typical heart block, with pulse of eighteen. Cultures from the post nasal space were positive, while throat cultures were negative. The

XUM

other three cases were complicated by scarlet fever, and therein lies the difficulty of diagnosis, for we know that scarlet fever can give a membrane almost identical with the diphtheria membrane, and this confuses us, let me say, however, that diphtheria in the post nasal space may never form a visible membrane, but simply a purulent looking discharge is seen pouring out of the post nasal space when the child gags on throat examination. Of these three cases complicating scarlet fever, all were given antitoxin, but too late in two of them. Both of these had virulent scarlet fever. One died a typical diphtheria death from heart failure, the other died apparently from the toxin of scarlet fever or from the bronchopneumonia which developed, but the diphtheria bacillus in this case was isolated by the bacteriologist of the Petersburg Health Centre and injected into guinea pigs for the routine tests for virulence. It was found to be a virulent strain of the diphtheria bacillus. That it had its part in causing death can hardly be doubted.

These cases are reported to show the virulence of the diphtheria bacillus in the post nasal space and to remind us to be on our guard for it, especially in scarlet fever cases. In my opinion, all scarlet fever cases should be cultured for a questionable cross-infection, and, if any doubt exists, antitoxin should be given. Some workers claim that the positive diphtheria cultures obtained in scarlet fever cases are harmless and that these cases are not truly diphtheria. I shall certainly hereafter take no chances, having seen two cases this winter with absolutely positive evidence that the diphtheria bacillus was not only virulent, but a very thunderbolt of death. Culture every case on the first visit, and administer antitoxin on the slightest suspicion will be my motto from now on.

Antitoxin is the only curative measure we have for diphtheria anywhere in the body. Antitoxin can be given from one day up and I have yet to see a single bad effect from its administration, nor is there such a thing as an overdose. Small doses may result in a fatality. Overdoses never do.

In conclusion, then, I desire to bring before you for discussion the subject of diphtheria in all of its phases, but especially its early diagnosis and antitoxin administration in some of the rarer manifestations of the disease.

THE RELATIONSHIP BETWEEN DISEASES OF THE BILIARY TRACT AND DIABETES MELLITUS.*

By I. A. BIGGER, M. D., University, Va.,
and
H. B. MULHOLLAND, M. D., University, Va.

The etiological factors in the production of diabetes mellitus have not been conclusively proven, although its association with a deficiency in the internal secretion of the pancreas is definitely established. Cecil, quoted by MacCallum[1], in studying a number of cases of diabetes, found pancreatic lesions in more than 87 per cent, the islands alone being affected in 12 per cent.

The biliary apparatus and tracts are closely associated, anatomically and embryologically, with the pancreas. These structures are all developed from the same segment of the primitive gut. In the majority of cases the pancreatic duct opens into the common bile duct immediately before the latter enters into the duodenum. The lymphatics from the bile passages, gall-bladder and pancreas, anastomose around the head of the pancreas. As a result of the relationships above described, two avenues for the transmission of infection from the biliary apparatus to the pancreas are obvious. The other possible modes of transmission are by the blood stream, and through direct contact. It was previously thought that the most frequent mode of transmission was through the ducts. This was thought often to occur, as in Opie's original case, in which a small stone blocked the opening into the duodenum and allowed bile to be forced into the pancreas. Sweet[2] believes that chronic pancreatitis is a lymphangitis, secondary to a focus of infection in the wall of the gall-bladder. The work of Judd and Mann[3] would seem to support this theory. These investigators showed that a pressure of from 500 mm. to 1,000 mm. of bile in the ducts was necessary to produce an acute pancreatitis. They further showed that the secretory pressure of the liver did not exceed 350 mm. of bile. Only when the animal vomited, with the duct ligated, did the pressure reach as high as 1,000 mm. of bile. Therefore, they conclude that only in exceptional circumstances is bile forced back into the pancreas under sufficient pressure to produce a pancreatitis.

*From the Departments of Surgery and Internal Medicine, University of Virginia Hospital.
Read before a session of the Warren-Rappahannock-Page Counties Medical Society, April 28, 1925.

Fallon[4] reports three cases of acute pancreatitis, all of whom had gall-stones in the gall-bladder, but not in the ducts. Watts[5] reports seven cases of acute pancreatitis, five of whom had gall-stones in the gall-bladder, and one of these had a small stone occluding the ampulla of Vater. Moynihan[6] states that pancreatitis is generally due to gall-stone irritation.

Granting that diseases of the biliary tracts may have a causal relationship to pancreatitis, as a natural sequence it is possible that certain cases of diabetes may have their origin in diseases of the gall-bladder and ducts. Moynihan states, "the importance of the early recognition and treatment of chronic pancreatitis cannot be exaggerated, for the disease if left unchecked may produce such sclerosis of the gland that the whole secretory substance and the Islands of Langerhans may be destroyed. The result is diabetes."

Eustis[7] reports thirty-six cases of alimentary glycosuria observed over a period of several years. Fifteen of these showed definite symptoms of gall-bladder disease, and six developed diabetes.

Lichty and Woods[8] report twenty-five cases of disease of the biliary tract, associated with glycosuria. Among these were three cases definitely diagnosed diabetes mellitus, which were apparently cured by operation on the biliary tract.

Rabinowitch[9] states that 80 per cent of the cases of gall-bladder disease in the Montreal General Hospital showed hyperglycemia. In a biometrical study he found that nine times as many patients with disease of the gall-bladder and bile passages had diabetes as would be expected by the law of probabilities. In patients with pancreatitis there were forty times as many diabetics as the law of chance would allow. He concludes that from this point of view a casual relation is demonstrated.

Jones *et al*[10] in a study of sixty-eight cases of diabetes found evidence of gall-bladder disease in 22 per cent, and in over half of their cases they found a diminution in one or more of the pancreatic enzymes. They consider cholelithiasis one of the most important factors in the etiology of diabetes mellitus in older people.

Frissel and Hajek[11] report a case of catarrhal jaundice—which is considered to be an infection of the biliary system—in a girl eight years of age, who later developed diabetes mellitus. Two of the same family with epidemic jaundice had a transient glycosuria. Koleczeck[12] reports a similar case.

Joslin[13] thinks it not unreasonable to suppose that disease of the pancreas may lead to destruction of the islands. Several of his cases showed definite improvement when the gall-bladder symptoms subsided. On the basis of this he advises all nondiabetics with gall-bladder disease to be operated upon, and diabetics with symptoms of gall-stones to have them removed when circumstances permit.

In a study of thirteen autopsies on diabetic patients, performed at the University of Virginia Hospital, the following associated conditions were noted:

Chronic cholecystitis, cirrhosis of liver, chronic pancreatitis	2	15.3%
Chronic cholecystitis with chronic pancreatitis	1	7.7%
Cirrhosis of liver with pancreatitis	1	7.7%
Gall-stones in gall-bladder and pancreatitis	1	7.7%
Atrophy of pancreas	3	23.1%
Chronic pancreatitis	3	23.1%

Five cases, or 38.5%, showed lesions of the biliary tract. Eight cases, or 61.6%, showed evidence of a pancreatitis. Five patients, or 38.5%, showed lesions in both the biliary tract and pancreas.

In this connection we wish to report an interesting case which we have recently observed:

Mrs. M. S., white, aged forty-seven years. Admitted to the University of Virginia Hospital, January 25, 1925, complaining of severe pain in the epigastrium and right hypochondrium.

F. H.: Unimportant.

P. H.: Unimportant.

Present Illness: Ten months before admission she began to suffer with ill-defined abdominal pain associated with general weakness and indigestion. Two months before admission she developed pain in the upper right quadrant of the abdomen, and ran a temperature as high as 102°. At this time urinalysis showed sugar. She was kept in bed for about two months on a low carbohydrate diet, and under this regime showed considerable improvement until three days before admission, when she developed a very severe pain in the epigastrium, radiating to the right shoulder and towards the left, and accompanied by nausea and vomiting.

Examination: Showed a somewhat undernourished white woman about fifty years of age, apparently very ill. There was no clinical jaundice. The heart and lungs were essentially normal. Abdomen was moderately dis-

XUM

tended throughout, most markedly so in the epigastrium. There was considerable rigidity in the epigastrium and right hypochondrium, associated with quite marked tenderness. Liver dullness was normal, but an indefinite mass could be palpated in the glall-bladder region. There were no signs of free fluid in the peritoneal cavity. Temperature 102°, pulse 140, respiration 24 to the minute. Leucocytes 30,000. Urine showed a large amount of sugar, acetone and diacetic acid. Blood sugar 142 mg. per 100 c.c. of blood. Carbon dioxide combining power of the venous blood 44.1 vols. per cent. She was given 1,800 c.c. of 5 per cent glucose solution, subcutaneously and intravenously, with fifty units of insulin preparatory to operation. Under gas-ether anesthesia the abdomen was entered through an upper right rectus incision, the gall-bladder found distended with pus and to contain gall-stones. The pancreas was definitely thickened and indurated, but no evidence of acute pancreatitis was noted. There were no stones in the bile ducts. Cholecystostomy was done, the stones removed, and a rubber tube sutured into the fundus of the gall-bladder for drainage. Cultures from the gall-bladder showed B. Coli.

The following day the blood sugar was 83 mgm. per 100 c.c. of blood, and the carbon dioxide combining power of the venous blood was 37.1 vols. per cent. Urine showed no sugar but acetone and diacetic acid. She was again given glucose and insulin.

Two days after operation the blood sugar was 52 mgm. per 100 c.c. of blood. Carbon dioxide combining power 51.3 vols. per cent. No further insulin was given. During the second twenty-four hours she excreted 2.1 gms. of sugar.

On the third day the blood sugar was 138 mgm. per 100 c.c. of blood. Carbon dioxide combining power 56 vols. per cent, and urine negative. At this time she was placed on full liquids, remained sugar free and showed no further acidosis. Several days prior to discharge the patient was placed on a regular diet, which she was able to take without showing any evidence of diabetes.

Discussion

It seems to be the consensus of opinion that pancreatitis is often associated with disease of the biliary tract, and that chronic interacinar pancreatitis is at least in the majority of cases due to a lymphangitis originating in the gall-bladder.

It would seem to us that the logical sequence of replacement of the normal pancreatic tissue by fibrous tissue would be a disturbance of the entire function of the gland, including that of internal secretion. We believe that the evidence of a derangement in external pancreatic secretion as found by Jones and his co-workers supports this view. The biometrical study made by Rabinowitch seems to lend strength to this supposition.

Our series of cases, although too small from which to draw any definite conclusions, show a high incidence of associated disease of the pancreas and biliary tract.

The entire disappearance of the evidences of diabetes in our case, immediately following relief of the gall-bladder infection, in conjunction with similar cases reported in the literature, is to our minds quite significant.

Conclusions

1. From the literature and our small series of cases, there seems to be a definite causal relationship between diseases of the biliary tract and diabetes mellitus.

2. Removal of a focus of infection in the biliary tract will at least temporarily relieve certain cases of diabetes.

3. We, with others, feel that this is another indication for early operation in gall-bladder disease in non-diabetics.

4. Diabetes associated with gall-bladder disease should be considered an added indication for operation, but only when the patient has been properly prepared.

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VASCULAR SYNDROMES IN THE EXTREMITIES.*

By THOMAS M. FOLEY, M. D., F. A. C. S., Washington, D. C. Clinical Professor, Orthopedic Surgery, George Washington University Medical School.

I desire to present a general survey of the circulatory disturbances most commonly found in the extremities. Since the work of Buerger and Leriche, a renewal of interest in these clinical entities has come forth.

While the theories regarding the etiology and pathology of these syndromes are controversial, sufficient clinical data is now available to warrant the construction of separate and distinct entities.

For purposes of description based to a large degree upon the pathological lesions, these disturbances are classified as (1) vaso-motor, or non-obliterative, and (2) organic, or obliterative. Of the vaso-motor group are Raynaud's disease, erythromelalgia, scleroderma; angioneurotic edema and certain types of symmetrical gangrene.

Etiologically, those types classified as vaso-motor are closely related and clinically possibly dependent upon a neurogenic basis. Most writers are in agreement that these angioneuroses occur in subjects constitutionally inferior, with unstable nervous system and neuropathic deviates. A few authorities are on record as ascribing a congenital hypoplasia of the cardio-vascular system as an etiological factor. Many of the vaso-motor neuroses are attributed to a vaso-constriction as a result of a reflex stimulation of the sympathetic fibres, imbedded in the adventitia of the arteries. Leriche is also of the opinion that these filamentous fibres follow along the main trunks of the vessel. This view is not shared by Todd and others who still stick to the earlier anatomical conception that the sympathetic nerve supply of the vessels is segmental. Experimental investigations and clinical results so far obtained by Leriche and others as a result of periarterial sympathectomy, lead to the conclusion that the nerve elements surrounding the nerve walls are in part regulatory mechanisms.

Typical of the vaso-motor disturbance in the extremities is Raynaud's disease. This condition was described by Raynaud in 1862, as a bilateral asphyxia of the fingers or toes, intermittent in character and symmetrical in distribution. At times the disease process may advance to the stage of symmetrical gangrene. Roentoengologists have shown that when the disease has existed for a considerable period of time, osseous changes, destructive in their nature, are demonstrable and are considered of diagnostic value. Of great clinical importance is the relation of gastric pains in Raynaud's disease. Raynaud in his early studies called attention to these gastralgias and their occurrence simultaneously with the changes in the extremities. Vomiting and diarrhea were also noted by him in the acute attacks.

G. A. Friedman reports a case of "local asphyxia of the extremities (Raynaud's disease) with the hitherto undescribed complication of intermittent achylia gastrica. Abercrombie narrates the history of a boy, aged three years, who, before the onset of the asphyxia was very yellow and who, when his hands were cold, cried on account of the pain in his stomach. When his hands became warm again, the pain in the belly disappeared. Paroxysmal hemoglobinuria was also noted in this case. One of Fox's cases suffered from nausea in the morning and often vomited after eating. A second patient of his, with gastro-intestinal disturbance complicating Raynaud's disease, vomited frequently after eating and had frequent attacks of diarrhea. It is possible that the diarrhea was due to the achylia, a common cause of this condition. The attacks might indicate a spasm of the arterioles in the gastric glands."

The etiology of this condition is obscure, but the disease is manifested frequently in neuropaths and often following psychic trauma. Repeated microscopic examinations of vascular segments have not revealed any organic pathol-

*Read before the District of Columbia Medical Society, April, 1925.

ogy. It is universally held that the symptoms are the result of a vasoconstrictive condition.

In 1878 Weir Mitchell described a condition of the extremities characterized by an intense redness, paroxysmal, aggravated by pendent position, absence of intermittent claudication, pain brought on by posture and swelling of the extremity, temporary and induced by mechanical factors. Etiologically, this condition is dependent upon a vasodilatation in contrast to the vasoconstriction phenomena of Raynaud's disease. The studies of Raynaud are to the effect that the dilatation in this disease results from sympathetic paralysis. Clinically, the symptoms are often restricted to the radicular distribution of one or more nerves without, however, the presence of the common symptoms associated with interstitial neuritis.

Schultes described certain sensory phenomena and designated the clinical entity as acroparesthesia. Associated with these sensory anomalies were vaso-motor phenomena such as coldness and pallor of the skin.

Closely related to the above conditions is a trophoneurosis designated as scleroderma, the characteristic symptoms of which are localized edema, sensory disturbances, joint lesions, induration of the skin, pigmentation and vaso-motor disturbances.

As a result of vascular shocks, several French investigators have referred to the post-traumatic condition in the limbs, characterized by colorless, lifeless and at times gangrenous extremities, under the caption of "Stupeur des Arteries."

In contrast to the vaso-motor or trophoneuroses, functional in their nature, your attention will be directed to several organic diseases of the vascular system in contrast to those of a neurogenic nature. While such an arbitrary distinction between the neurogenic and organopathic is made for purposes of presentation in these vascular syndromes, clinically, such a strict delineation is not applicable. In recent years, Weiss, Van Winiwarter and Buerger have erected clinical entities in which symptoms simulating those of the vaso-motor trophoneuroses were present, but dependent upon complete occlusion of the arteries or veins. This condition carries the nomenclature of thrombo-angitis or thrombo-phlebitis obliterans.

The active causative agent of this condition cannot be definitely stated. Some workers believe that as a result of the ionic imbalance, a deposit, resulting in localized pathology, takes place. Other workers entertain the theory that by dynamics, stasis of the blood current acts as an exciting agent for the subsequent thrombotic process. Infectious phlebitis, closely associated with typhoid fever and other infectious diseases, resulting in thrombotic foci, have led certain workers to conclude that an early localized infective phlebitis or arthritis is essential to the basic pathology for thrombo-angitis obliterans. Sufficient clinical data is now at hand, based upon statistics of 500 cases, that this disease may be said to be exceedingly prevalent among the males and more especially Hebrew race.

The symptomatology is characterized by an obliteration of the pulsation distal to the thrombotic area. Pain intensified in the pendent or elevated posture is in contra-distinction to that observed in erythromelalgia. The absence of pulsation can be said to be pathognomonic of thrombo-angitis obliterans, thereby being of extreme differential value in differentiating this condition from vaso-motor disturbances characterized by Raynaud's disease.

Redness is a constant symptom and is intensified by the placing of the limb in a dependent position. This chromatic reaction disappears on digital compression or elevation yielding to ischemia. Symptoms of intermittent claudication are usually present and at times associated with a chronic persistent puffiness. As a result of the occlusion of the circulation to the extremity, trophic disturbances are frequently manifested, such as ulcers and gangrene.

Pathological examinations reveal an acute, inflammatory lesion, upon which there are deposited miliary giant cells and a secondary stage of organization and healing. Secondary to this organization and canalization, a disappearance of inflammatory signs takes place. As a result of this fibrosis, connective tissue is thrown out, resulting in a combining of the vascular elements.

In contrast to the above organic vascular disease is that of arteriosclerosis of the extremities, resulting in gangrene. While the onset of thrombo-angitis-obliterans is sudden, symptomatology in the vascular sclerosis is gradual and dependent upon systemic pathology. It may be said that with few exceptions (presenile arteriosclerosis), this condition is rarely found prior to the fifth decade of life. Examination will reveal systemic manifestations of a prolonged hypertension. Asso-

ciated with this condition are symptoms indicative of cardio-renal disease. The localizing symptoms indicate a gradual obliteration of pulsation, trophic disturbances, and inability of the circulation to compensate for excessive demands. Interference with the circulation being gradual and progressive, gangrene is a natural sequelae. Of diagnostic aid is roentgenographic examination revealing in the final stages organic deposits within the vessel walls. Microscopic examination of the vessel reveals a roughening of the intima with infiltration of the connecting tissue with small round cells and a proliferation of the elastic intima.

Treatment.

Treatment must of necessity be directed along lines that will tend to remove or alleviate the etiological conditions, whether of the neurogenic or organopathic types. As Raynaud's disease is held to be a vasoconstrictive disease, measures should be instituted to cause a vasodilatation.

The nitrate and benzyl benzoate constitute our main therapeutic armamentarium. Leriche's periarterial sympathectomy, a procedure consisting in decortication, thereby removing the filamentous sympathetic elements, causing a dilatation and the establishment of a compensatory circulation to the extremities, offers good results. The relation between the gastralgias and Raynaud's disease is of diagnostic value and more especially so when considered in the light of surgical reports for the relief of pain by vascular decortication.

Ladd and Gannon, in 1920, reported a case of exploratory operation for gastralgia, which they subsequently showed to be the result of beginning vascular pathology of the aorta, relieved by operative procedure. The causalgias, which were formerly held to be the result of irritative nerve lesions, were shown in many cases to be relieved by a stripping of the sympathetic filaments from the larger vessels in the traumatized area. Painful stumps with their alleged neueromatous formations have been relieved by Leriche's operation.

Endocrinology has offered but little explanation as to the etiology of the vasomotor trophoneurosis. The administration of polyglandular extract is stated to be of therapeutic value. It is conceded by the author that where there is a lowered vascular tone adrenal preparations to combat the general vascular asthenia are of value. As a general therapeutic measure, the underlying neuropathic condition should receive consideration. Physiotherapy as an adjunct is of value for the relief of local symptoms.

Treatment of the organic or demonstrable lesions, as a result of thrombo-angitis obliterans and arteriosclerotic processes of the vessels, involves methods to establish a compensatory circulation. In complete occlusion of the vessel, the primary indication is placing the extremity at rest, instituting methods tending to cause a local hyperemia. Of primary importance is position and thermotherapy, tending to increase the vascular components. Diathermy has been shown to be of extreme value in inducing hyperemia. In case to be cited, relief was afforded by this procedure only. If the supposition that the lesions are dependent upon altered viscosity of the blood, as shown by the Hess viscosimeter, is true, the treatment as outlined by Koga, consisting of flushing the intestinal tract with salt solution and Ringer's solution through a Rehfuss tube and also sodium iodide intravenously, are of value.

The author now desires to cite a case typical of the functional or vasoneuroses and one typical of the organic disease.

Vasoconstrictive; H. R., white, male, age forty-five. Referred by Dr. Wm. E. C. in the spring of 1919. He was under treatment for gastric disease, and had had an operation two years previously for duodenal ulcer.

Locally he complained of indefinite pains in the calves of the legs after walking a few blocks. This pain ceased when patient came to a halt. Examination showed Achilles and patellar reflexes normal. Skin dry and pulsation in the dorsalis pedis and popliteal arteries present. Various orthopedic measures were tried for the relief of the leg pains without much effect. During the following winter, while exposed to severe cold on a hike, the second toe on the left foot became white and painful. This was followed by gangrene of the tip of the toe with final demarcation and loss of part affected, also cessation of the pain. With the exception of the indefinite leg pains nothing unusual occurred until the summer of 1921, when the little toe of the same foot became gangrenous. About one-third of the toe finally sloughed off. This attack was accompanied by the most excruciating pain requiring morphine. The pain was most marked when the foot was elevated. Some relief was obtained by constantly flexing the toes. At this

XUM

time the pulsation in the distal arteries was absent. The following drugs were administered without any marked effect: amyl nitrite, pilocarpin, sodium iodide and the extract of thyroid gland. A psychoanalysis by Dr. Wm. A. White failed to reveal a complex or any psychoneurotic element. The patient asserted that there must be a nervous element as at times he could run up stairs without discomfort and again there would be pain in the calves. Sugar was absent from the urine during the entire period. Three Wassermann tests were negative. The last attack occurred in the winter of 1922-23. The big toe nail-bed was the site. A crater formed under the nail. The condition became prolonged and the pain was very severe. The pulsation in the dorsalis pedis and posterior tibial arteries was still absent. Patient decided to submit to a Leriche operation and in the spring of 1923 the femoral artery was denuded of its sheath. The day following the operation the secretion in the nail bed ceased and in a few days the crater healed. On palpation two days after operation, pulsation could be detected in the dorsalis pedis and posterior tibial arteries, and they have remained pulsating ever since. Patient made an uneventful recovery but in 1924 patient was operated on again, this time for gastric ulcer. It is of interest to note the relation between the gastralgia in this case and the various circulatory phenomena. This close relation between the gastralgias and vascular lesions was commented upon by Ladd in 1920.

Case of Organic Lesion.

M. B., age thirty-two, male, Polish Jew. After having exposed both feet to cold, he suffered from cramps in both legs which disappeared in a day or two. A year later there was a recurrence of the pain. These indefinite pains existed for several years, until, in 1924, the typical symptoms of intermittent claudication came on, leading him to try various methods of treatment, but without avail. Finally, about five years after the onset of the disease, prodromal symptoms of gangrene or trophic disturbances developed in the big toe of the right foot, the toe becoming swollen and red. The trophic disorders showed themselves under the nail bed.

Pulsation was absent in the dorsalis pedis and posterior tibial arteries. A decortication of the femoral artery was done without relief. Three months later patient was subjected to diathermy, and in five weeks the lesions had disappeared. The pain ceased also.

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CLINICAL PSEUDO BULBAR PARALYSIS DUE TO INTRACRANIAL HEMORRHAGE OF THE NEW BORN.

By COURTNEY EDMOND, M. D., F. A. C. S.,
Clifton Forge, Va.

In presenting to the Society this paper I trust an apology may not be necessary should the subject prove predominantly neurological. Oto-Laryngology, Ophthalmology and Neurology are, indeed, closely allied. At any rate, my justification might easily be because the patient was brought to me for a diagnosis.

It is agreed that medical case histories are of great importance. Certainly this is true of the following, which case must be reported from its beginning in utero, although at the present time our patient is ten years of age. The mother, a woman of large skeletal frame then twenty years of age, remained in good health throughout the pregnancy, suffering no falls or other trauma. There was one miscarriage before and one after the birth of our patient which occurred eighteen months subsequent to marriage. Another child was born eight years later which is now an attractive and healthful girl of four.

Fetal movements were felt at about four and a half months and it is thought continued in a normal manner to term. A corset was loosely worn the first seven months and then an abdominal support. The mother, therefore, in obstetrical parlance, became a primipara with the birth of our patient. The parturition was of the dystocia type, long and difficult, but without instrumental aid. Labor continued for seven hours, the physician making repeated demands upon the mother to finish the act. When the patient was born the mother was so exhausted that she became unconscious for about an hour. Pituitrin was used. The head was born last accompanied by severe compression and con-

gestion, producing the well-known "blue-baby;" weight seven pounds; development good. It is stated that birth traumatism, causing a large occipital hematoma, so greatly separated the bones of the skull that remoulding of the head was necessary.

A feeble cry was heard two hours after birth, and movements of the legs are recalled a few days later. During the first four days the infant refused to nurse and convulsions occurred at frequent intervals. The head, and particularly the left eye, turned to the left in a violent manner, and the left arm and left leg would simultaneously draw up into rigid and cramped positions. The patient was plainly in a critical state and no encouragement as to life was given or expected. At this juncture, convinced of an intracranial clot, the attending physician almost cruelly announced that should the patient live it would become "an idiot." This expression, even today, harrows the mother's feelings.

However, when the patient was five days old it began to nurse and the convulsions ceased. At four and a half months she sat-up and at sixteen months could stand unaided. The deciduous teeth appeared at six and a half months.

During the succeeding twelve months improvement in the physical condition was surprisingly constant. But it was noticed that the head would still occasionally fall to the left and that the left arm and leg would contract in the manner described. The patient was now weaned and put on Horlick's malted milk. When about sixteen months old whooping-cough developed and gradually reduced the patient to skin-and-bones—so thin, the mother states, that the intestines could be seen through the impoverished abdominal wall. But at twenty-two months the patient was again so much improved that she seemed about normal, except for the following: Walking had not begun and the faculties of speech and deglutition were plainly defective. The mother had used the epithet "lazy baby." Walking began about the twenty-third month. Up to this time there had been slight effort to talk although the words "papa" and "mama" could be vaguely understood. The patient developed the habit of pointing at things with a kind of grunt.

When three years old mild weakness of the legs attracted attention because of needless falling and skinning of the knees. The legs would give away in a gradual manner. The left leg was observed to be smaller than the right, which discrepancy continued for months insidiously disappearing. A slight drooping of the left eyelid could be noticed when the patient became fatigued. There have never been epileptiform seizures, and no convulsions since the fourth day. Faint-spells have been complained of recently which the mother attributes to approaching puberty.

Status Praesens: Patient somewhat undernourished female, ten years of age; weight seventy-eight pounds: height five feet one inch; blonde type, the blue eyes being alert and expressive. No mental enfeeblement. The countenance is intelligent, the upper half of the face being better in appearance and development; nostrils a trifle dilated; upper teeth and lip distinctly protruding. The lower jaw and lip appear a trifle underdeveloped, the lip resting just posterior to the upper incisor teeth; the mouth is kept partly open, being large and noticeably wetted with saliva, demanding frequent use of handkerchief during examination. When widely opened it is quite round. The speech is grossly abnormal, being a jumble of words and sounds of nasal quality produced as if directly from the larynx unmodified by tongue or lips. The breath is wasted when attempting to speak clearly. The larynx is normal. With deliberate effort the patient can fairly well pronounce the vowels, but the consonants are imperfectly produced, particularly the so-called explosives "p" or "b"—possibly due to some patency of the nares.

Single words are much better repeated after the physician than groups of words, and a few words better than longer sentences. If left to the habitual manner of speaking, words and sentences, begun with hesitancy, are so curiously enunciated as to be unintelligible. Her parents at times have difficulty in understanding the patient's deformed conversation, particularly if the child is excited. Her manner of laughing is so sudden and grotesque as to frighten those unfamiliar with her habits. The patient is well graded at school and reads aloud from book in a surprisingly fluent style considering her severe handicaps. The *tongue* is of normal appearance; no wrinkling or visible atrophy; its base firmly resists tongue-depressor (which excludes paralysis of the stylohyoid and posterior belly of the digastric muscles supplied by the lower facial

XUM

nerve). The tongue can be protruded straight forward and to either side but cannot touch the roof of mouth or upper incisor teeth when mouth is open (indicating paralysis of the lingualis superior).

Patient cannot whistle (suggesting involvement of fibers from the hypoglossal to the facial which supply the orbicularis oris). Upon questioning she proudly states that her little four-year-old sister can whistle, which statement I have verified. (At this point it is interesting to diverge and quote Gowers as follows: "The orbicularis oris and the transverse muscles of the front of the tongue have a functional association closer, perhaps, than any other two muscles in the body equally distinct. Neither can be put in action without the other").

The lower-jaw movements are defective forward and lateralward, or for the grinding motion. The cutting edges of the upper and lower incisors cannot be approximated on account of weakness of the pterygoids, although a wooden blade can be firmly clenched between the molar teeth. The lips show no atrophy. The palate sags and when touched with applicator feels stiff and heavy, movements being sluggish and incomplete and the reflexes very difficult to obtain. Sensation is not abolished. The masseter reflex is exaggerated. There is conspicuous difficulty with mastication and the fingers can be observed to repeatedly assist in placing food between the teeth. Occasional strangulation occurs with regurgitation of liquids into the nose, but the mother lays no stress on this symptom. The legs are well proportioned and equal in size. Pulse 74; respiration normal; ears and nose negative; taste and smell unimpaired; eye-grounds normal, likewise motility and muscle-balance; pupils equal, reacting to light and convergence; no ptosis; no Rombergism, or special gait, as crossing of the legs when walking; no spasticity; no talipes, the feet being well placed on the floor; patellar reflexes equal and a trifle exaggerated; the plantar reflexes are weak and difficult to obtain, the soles not being ticklish; Westphal's paradoxical foot phenomenon is present. No ankle clonus. The following reflexes are absent: Babinski, Oppenheim, Chaddock and Gordon. The finger-to-nose-test shows incoordination, greater on the right; the heel-to-knee test is well performed; no adiadokokinesis, no astereognosis; the fingers are used normally; no choreiform or athetoid movements. The Wassermann and spinal fluid tests are omitted.

It may be commented that this case is distinguished from genuine bulbar paralysis by its important history; the absence of conspicuous degenerative atrophy in the weakened muscles; the course of the psuedo-disease, which is not progressively worse; the preservation of reflexes and the unaffected respiration and circulation. In the several text-books at my command, including Diseases of Children, I can find no reference to a similar case extending from birth to puberty. It is true that Gowers under the heading "Birth-palsy" mentions bulbar symptoms in association with others, but he proclaims no such syndrome. Perhaps the case here reported might with propriety be placed in this category.

In contemplation of the symptoms here recorded I am aware that the various types of "Little's disease," with bulbar symptoms, come to mind, but, upon reflection, the resemblance is slight. "Little's disease," according to Little himself, is essentially infantile spastic paralysis clearly dating from birth, and *not* the various similar affections originating during infancy and later showing spasticity and plegia. In the case here mentioned there was no paralysis or spasticity of the upper or lower extremities at birth, or developing latter. There was no premature birth, or abnormally small infant at birth. The sitting-and-standing postures were assumed about the usual age, although the walking faculty was a little delayed. No suggestion of the cross-legged or "scissors-gait," has been observed, the symptom so characteristic of "Little's disease." Dr. Joseph Wall states that in "Little's disease" those reaching adult life are never without the tell-tale evidences of spastic paralyses.

I have on occasions carefully observed this child when roller-skating or romping with playmates, and it may be stated that there is nothing to attract the physician's attention until the patient attempts to talk, when his keen professional interest is at once aroused.

Here, then, interesting to the laryngologist, is the word-picture of a girl ten years of age with intellect unimpaired, having full use of arms and legs, hands and feet, who to all outward appearances moves and has her being as other children, and yet is sadly bereft of the power of articulate speech—the one trait which so conspicuously removes the human from the lower order of beings!

A MORE SATISFACTORY TREATMENT FOR NARCOTIC DRUG HABITUATION.*

By W. C. ASHWORTH, M. D., Greensboro, N. C.

The subject of my paper, A More Satisfactory Treatment for Narcotic Drug Habituation, has been chosen on account of the fact that the treatment of the average patient suffering from narcotic drug disease is a very difficult, if not an impossible, undertaking.

I have, for nearly twenty years, been endeavoring to formulate a plan of treatment for narcotic drug disease that would be satisfactory to myself as well as to the patient. I have endeavored to ascertain, as nearly as possible, a fundamental cause responsible for the formation and continuation of the habit of my narcotic drug patients.

I am fully cognizant of the fact that a number of drug patients acquire the habit solely on account of dissipation, or, in other words, they desired the euphoria and pleasurable stimulation resulting from the use of narcotic drugs. I am also mindful of the fact that the members of our profession are also responsible for a number of narcotic drug patients. It is a lamentable fact that we are sometimes entirely too quick to administer a narcotic drug in lieu of other remedial measures which might require a little more time, but, nevertheless, be satisfactory to the patient as well as to the attending physician. We are all familiar with the ubiquitous neurotic who exaggerates his or her pains and is constantly therefore "camping on the trail" of a physician to prescribe some drug that will be a panacea for pain. I take into consideration the fact that the average physician is so busy endeavoring to solve the "bread and butter" question that he frequently has neither the time nor disposition to diagnose infirmities from which the neurotic suffers morning, noon and night. We are also mindful of the fact that narcotic drugs are prescribed for the relief of pain which has its origin in some diseased organ, or, in other words, narcotic drugs are legitimately prescribed for patients who are suffering from organic diseases. The above class of cases deserve our commiseration, and we have many times wished that the morphine could be obtained for this class of cases without the restrictions connected with the ramifications of the Harrison Narcotic Law, which, at the present time, prevents us in many instances from prescribing for this class of patients.

Now as to the treatment of narcotic drug habituations, we all acknowledge that we are confronted with the most perplexing problem in the domain of our professional work. It is difficult, in the first place, to obtain full cooperation of the patient and prevail upon him or her to be subservient and remain under our immediate surveillance a sufficient length of time for the completion of the cure. Of course, the etiology of the habit must be given due consideration, and also the patient's mind must be disabused of any doubts as to the efficiency of our treatment. The importance of careful study of the personal equation, the temperament and the idiosyncrasies of the patient cannot be over-estimated. The average drug patient does not necessarily belong to the unwashed element of society, but in many instances he or she represents the better class of society. Of course, we recognize the fact that a number of these patients are neurotics from the beginning, and that the transition from a neurasthenic condition to morphinism is a very easy procedure. We will be unfair to our drug patients if we do not fully investigate their ancestry and determine for ourselves whether or not they are suffering from hereditary defects, or an unstable nervous system, which tends to invite rather than repel a habit.

When I am confronted with a drug patient and am undertaking to formulate a plan of treatment, I can scarcely refrain from thinking of the following verses:

> "It has always been thus,
> From childhood's hour,
> I have seen my fondest hopes decay;
> For I have never loved
> A tree or flower,
> But what it was first to fade away."

I have seen so many of my pet remedies and treatments signally fail in the treatment of narcotic drug addiction cases that I am very reluctant, or rather afraid, to call the attention of the profession to new remedies or an improved treatment for drug addiction cases. I am sure, however, that the profession will be tolerant with me, since most of us have had sufficient experience with this class of cases to be fully convinced of our limitations. Of course, it is necessary to differentiate the pains or discomfort of malingering drug patients

*Read by title at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Richmond, Va., February 18-19, 1925.

from real pain and discomfort which naturally follows in the wake of the withdrawal of the drug. We must also recognize the fact that the narcotic drug user is a diseased individual and that certain pathognomonic symptoms are associated with the habit. I often state to my patients, in order to emphasize the above statement, that if Jess Willard should take morphine for six months he would be a neurasthenic and have all the classical symptoms which belong to the average morphine patient.

We cannot be just or do our best for this class of cases unless we constantly bear in mind the fact that they are suffering from a diseased mechanism and, therefore, deserve the same consideration and curative treatment as if they were suffering from any of the more common diseases.

The treatment for narcotic drug habituation which I am using at the present time, with comparatively satisfactory results, is the administration of allonal in sufficient dosage to produce a state of twilight-sleep. Of course, the dosage must be varied according to the susceptibility of the patient to the drug. I find that comparatively few untoward symptoms develop as an aftermath of the rational administration of allonal. I naturally presume that the members of the Society are familiar with the drug, but I doubt if any has been used generally in the treatment of narcotic drug habituation. I observe that the drug tends to obtund the sensibilities of the patient and produce an oblivion, which, of course, is absolutely necessary if the drug patient escapes the much dreaded withdrawal symptoms. The allonal treatment seldom disturbs the muscular co-ordination of the patient and the sleep obtained is usually refreshing and free from the nightmares that usually accompany the administration of most hypnotics in the treatment of narcotic drug diseases. The impression which is often associated with medicines of this class (barbital) is scarcely noticeable. Of course, it is of the utmost importance for the patient to be under the immediate observation of the physician who can readily regulate the dosage in conformity with the symptoms manifested from time to time.

Of course, allonal is not a specific for narcotic drug disease, but I believe, from an experience of its use in the treatment of nearly fifty cases, that it is probably the most dependable drug we have at the present time for the relief of the nondescript symptoms which accompany the withdrawal of narcotic drugs. The allonal treatment, as compared with the hyoscine method of treatment, is certainly much to be preferred, since the drug is comparatively harmless and seldom productive of cardiac weakness, and the arrest of the secretions, which is exceedingly disagreeable to the patient. I have observed that the percentage of relapses of patients who have been treated with hyoscine is usually large, on account of the fact that the nervous system of the patient reacts very slowly, and as a consequence he or she usually relapses from sheer weakness, if from no other cause. If the dosage of allonal is properly balanced I believe that it is possible to cure the average drug patient with only a negligible amount of discomfort.

Of course, the allonal treatment is not applicable in the treatment of patients who are using an inordinate amount of morphine. In this class of cases I usually reduce the dosage of the drug to one or two grains daily by the modified Lambert treatment and then administer the allonal treatment. I find that the Lambert treatment is usually satisfactory, provided it is sufficiently modified to enable the patient to reduce his dosage of drug without too much shock to the nervous system. The withdrawal of the last residue of morphine is usually the supreme test of a treatment.

I hope to be able to report a number of cases at the meeting of the Society next year. In the meantime, it is my purpose to investigate from every angle the allonal treatment, with the hope that I may be able to note better results.

MALIGNANCY OF THE LUNG FROM THE CLINICAL STANDPOINT.*

By C. LYDON HARRELL, M. D., Norfolk, Va.

I use the term, malignancy of the lung, in its broadest sense, including carcinoma, sarcoma and Hodgkin's disease, affecting lung, pleura and glands.

Primary carcinoma of the lung is very rare, forming about 1.5 per cent of all cancers according to Stevens. Carmon states that up to May, 1917, only 428 authentic cases of cancer of the lung had been reported, but lung metastasis is quite common. Of the cases reporting at

*Read before Seaboard Medical Society, at Rocky Mount, N. C., December, 1924.

the tuberculosis clinic where I work with Dr. Grandy and others, covering a period of five years, there were 3,011 cases examined; only two cases were diagnosed as having malignancy of the lung, one, a white woman, age fifty-five, with primary cancer of the breast metastasizing to the lung; the other, a colored woman, age sixty-eight, probable primary cancer in lung, reported in my series. Of the 1,750 cases reporting at my office for a chest examination (139 of these were children under twelve years of age), six were diagnosed as having a malignant condition of the lung. Two were probably primary carcinoma, two secondary, and two cases of Hodgkin's disease with pulmonary manifestation.

Very little is known of the etiology of primary cancer of the lung, except that those who work in cobalt mines are subject to it. According to Osler, primary cancer is usually confined to one lung, while secondary cancer is most common following cancer of the breast, and is usually bilateral, involving lung, pleura and glands. Hodgkin's disease always affects the glands of the mediastinum, usually bilateral, but more marked on one side than the other.

The most common symptoms of malignancy of the lung are pain in the chest, cough, dyspnoea, general weakness, loss of weight and hemoptysis. The cough is probably one of the first symptoms, paroxysmal in nature, and at times very distressing, growing continually worse as the growth increases in size. The cough is produced in a great measure, I believe, by the pressure of the tumor and glands on the bronchi and trachea.

Pain in the chest, which is usually confined to one side, though it may be felt beneath the sternum and radiate to the shoulder, is probably the next earliest symptom. Like the cough, it, too, is paroxysmal and at times very severe. In some instances it is pleuritic in origin, but more often is caused by pressure of the new growth on the nerve supply. The pain also increases in severity as the disease progresses and as the tumor increases in size.

Dyspnoea at times is a most distressing symptom, caused in all probability by pressure of the new growth on the bronchi and trachea. This is not one of the earliest symptoms, but when it does appear there is very little relief.

Loss of weight and general weakness is common in all, I mean both in primary and secondary cancer and Hodgkin's disease. Hemoptysis is quite frequent, occurring in four of my cases. This may be from congestion of the tissue surrounding the tumor or from erosion of small blood vessels.

Looking at these cases, one will observe a sallow complexion, with a downcast and despondent expression. They seem to realize that there is something radically wrong, though they have not been told. They have very slight or no elevation of temperature, slight elevation of pulse. I refer to the cases in the early stage before the mass or glands have increased much in size. The earliest physical sign of pulmonary metastasis is, according to Craver, "a peculiar limitation of breath sounds, especially marked during inspiration, covering a limited area of the chest. This may or may not be accompanied by fine crackling rales during inspiration." He also states that these findings may be observed in many instances before the X-ray findings. A little later on, as the tumor increases in size, you get dullness or a flat note to percussion over the growth, which is usually at the lower portion of one lung in back or between the vertebrae and scapula. If there is no fluid, the breath sounds are either distant or may be tubular in type, accompanied by coarse whistling rales. However, the physical signs in the case of a new growth in the lung are not very characteristic in the early stage. We have to rely chiefly on the history and X-ray findings. If there is fluid, aspirate; if bloody, malignancy may be strongly suspected. The X-ray usually casts a shadow that is quite characteristic in either condition.

Malignancy of the lung must be diagnosed from pulmonary tuberculosis, syphilis of the lung, pleurisy with effusion, abscess of the lung, and a few other less frequent diseases. In tuberculosis the pain and dyspnoea are absent, the cough is milder and of a hacking type. The lesion in tuberculosis is most frequent at the apex; the dullness is only slight and the rales are fine and moist. That of malignancy is usually at or near the base in the back. The signs, if present, are those of a complete consolidation. The rales are usually coarse and whistling (obstructive type). Several negative sputums, with a characteristic X-ray picture, usually clear the diagnosis. From syphilis of the lung, a careful history, negative sputum, and a positive Wassermann, with an X-ray picture should be sufficient. From pleurisy

XUM

with effusion, a bloody fluid, without the history of injury to the chest, usually means malignancy. In abscess of the lung, a characteristic profuse expectoration with a fetid odor is present, and X-ray picture further aids in the differentiation.

Hodgkin's disease is very difficult at times to differentiate from tuberculosis, especially in its early stage, that is, before the mediastinal glands are involved. Of course, you have your blood picture, which is considered by some to be fairly characteristic (not accepted by all). The only positive diagnosis can be made by the removal of a gland. Probably Hodgkin's disease should not be considered in this paper, as it has not been regularly classed as a malignant condition. The two cases I am reporting were of a malignant nature, and the symptoms were very similar to those of cancer of the lung.

As to the best method of treatment I know very little. The records do not show a single case of cancer of the lung or a case of Hodgkin's disease which has been cured. In cancer, palliative measures are all we can expect at the most. According to the best authorities, this is best supplied by deep X-ray therapy and massive doses of radium, either directly on the chest or through the bronchoscope. As to Hodgkin's disease, all the writers, that I consulted, and they were many, claim that irradiation gives the best result, the sooner you begin treatment the better. Arsenic, in the form of cacodylate of soda, and iron by mouth, nourishing food and rest, I believe to be very essential.

Following is the record of the cases that came under my observation:

Case 1. White female, age sixty-seven. Consulted me in July, 1918, complaining of cough, pain in left chest and hemoptysis. She gave a history of having her left breast removed by Dr. Payne two years previously for cancer. A radical operation was done with complete recovery from all external appearances. She has dullness and many rales over lower left back. The sputum was negative for TB. Diagnosed as metastastic cancer of the lung. This was confirmed by X-ray a few weeks later. The patient grew steadily and continuously worse, and died November 16, 1918. A few weeks before she died she developed fluid in the abdominal and pleural cavities, which had to be aspirated several times to relieve shortness of breath. This fluid was clear.

Case 2. White female, age thirty-one, married, two children. Was first seen in April, 1920. Had a small lump on left breast about the size of a hickory nut. She was two months pregnant at the time. I referred her to a surgeon. He advised her to watch the breast and if the lump continued to grow or to cause any symptoms whatever, to return at once. She did not return until August. At this time she was complaining of pain in the right breast and chest, with cough. The right chest was very dull throughout, with a few marginal rales. A diagnosis of cancer of the breast metastasizing to the lung was made, confirmed by X-ray. Surgery was considered out of the question, so she was referred for X-ray therapy. Her chief symptoms were pain in the chest, which was quite severe, cough, shortness of breath and loss of weight. In a few weeks fluid collected in the right chest; this was aspirated in an endeavor to relieve the dyspnoea. The fluid was orange colored, tinged with blood. She aborted in November and improved for a short while following delivery. She soon began to fail again, growing continually worse until she died in June, 1921, about fourteen months from the time she was first seen.

Case 3. Colored female, age sixty-eight. Reported at the TB Clinic July 13, 1923. Complained of cough, pain in left chest, shortness of breath, extreme weakness, loss of weight and hemoptysis. She gave a history of having had grippe in the early winter and had been confined to the house since. Examination revealed a very thin, emaciated woman. Pulse 108, temperature 98.9. The lower 2/3 of left chest was flat to percussion throughout. Tactile and vocal fremitus were diminished over the same area. There were a few fine rales heard at left apex. The right lung was hyper-resonant, no rales, and the heart was pushed over to the right. I made a diagnosis of pleurisy with effusion, and ordered the patient to the hospital for aspiration. On July 17, 1923, I removed 800 c.c. of bloody fluid from the left chest. My diagnosis was changed to malignancy of the lung. She was again aspirated on August 15, removing 800 c.c. of bloody fluid. Patient grew continually worse and died October 12, 1923, three months from the time I first saw her, about a year from the time of her illness. I regret that no autopsy or X-ray pictures could be obtained, but in all probability this was a primary cancer of the lung.

Case 4. White male, age sixty-five. First consulted me December 16, 1922, complaining of pain in lower right chest and small part of back, worse from 5 P. M. to 12 midnight. There was cough with slight expectoration, no blood. His past history was of no consequence, except he had contracted a cold about two months previously and has had cough with pain in right chest since.

There was no history of loss of weight. (I have recently learned that patient was injured in breast in an automobile accident about two years before his last illness). Examination revealed a large well-nourished man, weight 180 pounds, pulse 88, temperature 98, blood pressure 122/80. His teeth and gums were badly diseased. The heart was not enlarged, sounds were distant, no murmurs, regular, but slightly increased in rate. The chest was well-developed, and resonant throughout, except for a slight area of dullness from angle of right scapula to base, and under axilla. There were a few stick rales heard over this area and extending as far forward as anterior axillary line. The liver was not palpated. Urine showed a slight trace of albumin, no casts. My impression was that he had an adhesive pleurisy, probably secondary to the grippe or mouth infection.

On February 7, 1923, two months after he consulted me, patient consulted Dr. Rinker. At this time he gave a history of losing a great deal of weight. Cough and pain in right chest was growing continually worse; he had been spitting up some blood for past ten days. His sputum was negative to TB. Blood Wassermann negative. There was an area of dullness found about midway the back on the right side about the size of the palm of the hand, with a few coarse rales scattered over the back. The X-ray showed a very dense mass in the mediastinum with studded areas of density in both lungs, more on the right. A diagnosis of malignancy of the mediastinum, metastasizing to both lungs, was made.

The patient took X-ray treatment in Norfolk and Baltimore, but grew continually worse. I saw him again in June. He was suffering severe pain in right chest and dyspnoea. Was taking morphia constantly. The lower two-thirds of right lung was dull to percussion. He died August, 1923, about ten months from the time he was first taken.

Case 5. White male, age thirty-eight, business man. First consulted me in May, 1917, complaining of enlarged glands in neck and groin. His past history was of no consequence, except that he noticed the gland in his groin about a year ago, and the axillary and cervical glands became enlarged about six months ago. Family history negative.

Examination revealed a slender, fairly well-nourished man, weight 150 pounds. Temperature and pulse normal. The blood pressure was 110/70. Tonsils removed at fourteen years of age. Teeth in good shape. Heart and lungs negative. The glands in the groin were about the size of an egg, firm and not tender. The cervical and axillary glands were about the size of a small marble. The abdominal glands were not palpable, but became so a little later. The testicle on the right side was absent (probably undescended). Urine negative. Blood Wassermann negative. Blood: HGB 80 per cent; RBC 4,800,000; WBC 14,000. Polys. 54; small lym. 36; large lym. 7; eos. 3. After a short study I made a diagnosis of Hodgkin's disease. One of the cervical glands were removed and referred to Dr. Newcomb for examination. He reported it positive for Hodgkin's disease. The patient was then referred to Dr. Hunter for X-ray therapy. He was also given cacodylate of soda and iron by mouth for two months twice a year. He was allowed to continue at work, but advised to take things easy. He took X-ray treatments for about two months in each six months; the reactions were quite severe.

About the first of June, 1921, four years after I first saw him, he was taken quite sick, having contracted a bad cold that seemed to knock him out. He had not taken any X-ray treatments for nearly a year, his excuse being that the reactions made him so sick that he would scarcely get over the effects of one before it was time to take another. The glands that gave him the most trouble in the beginning were the deep abdominal glands; consequently, most of the raying was over the abdomen.

About the middle of June he came to the office complaining of weakness, shortness of breath, cough and pains in left chest. (Patient had put on a great deal of weight). The heart sounds were distant, with a pre-systolic murmur heard at left cartilage. The lower two-thirds of left chest was flat to percussion. I inserted a needle and drew off twenty ounces of cloudy, blood stained fluid. This was cul-

XUM

tured and found negative. A stained smear was negative to TB, but showed a few pus cells and many lymphocytes. He was put to bed. Blood count made June 21, 1921, showed WBC 5,950; polys. 61; small lym. 32; RBC 4,100,000, HGB 63. He was quite sick. I took him to Baltimore to consult Dr. Burnam. After going into the case, he advised the use of radium, but refused to treat him until the acuteness had subsided. The X-ray showed that the bronchial and mediastinal glands were enlarged; apparently the superficial glands were not causing trouble. He had to be aspirated two or three times to relieve dyspnoea, and the last time I removed forty-eight ounces of fluid. He took his first radium treatment July 1, 1921. After this he showed rapid improvement. He returned to light work in September, but continued to consult Dr. Burnam every three weeks for a year.

In April, 1922, he had another little flare-up, with cough, dyspnoea, and pain in chest. A small amout of fluid collected, but did not require aspiration, disappearing of its own accord. The patient was examined in Baltimore, July 3, 1922, and reported as doing well, no evidence of disease being detected. WBC 7,600; RBC 4,728,000; HGB 94 per cent. The following year he took no treatment but general care, and continued at work. On July 4, 1923, he did a hard day's work in an ice-house. This seemed to start things up again. I saw him a few days later, when he appeared to be quite sick, and had a return of all previous symptoms. He had a general glandular enlargement of both superficial and deep glands; the spleen was also enlarged. As soon as he was able to travel, he returned to Baltimore, but was refused treatment. He grew continuously worse and died two months later, about six and a half years after I first saw him, a little over seven years from the time he first noticed glandular enlargement. He responded well to X-ray treatment for nearly four years, stopped treatment for a year, then relapsed. Again he responded well to radium treatment for two years, stopped treatment for a year, then relapsed.

His blood picture is of some interest. The leucocyte count, with the exception of the first count of 14,000, ran from 5 to 6 thousand. Polys. 60 to 70 per cent; small lym. 25 to 32 per cent; large lym. 2 to 7 per cent. The platelets ran high, from 70,000 to 532,000. The lowest was found two weeks after he had taken a heavy dose of radium.

Case 6. White female, age thirty-three, married sixteen months, no children. First consulted me March, 1922, complaining of cough, expectoration, pain in upper left chest and shoulder, general weakness, and a rapid loss of weight. Sputum was streaked a few days previously and patient had a lump in the left neck. Her father died of tuberculosis one month prior to this. Mother living and in good health. Her past history was of no consequence. She had been working in a store as a saleslady up until the time she was taken sick, December, 1921, with what she called a cold; had general malaise, pain in back and left shoulder. She had a very sallow complexion, an expression that spelled anxiety and suffering. The finger nails were markedly "clubbed." Temperature 98.3, pulse 104, weight 143 pounds. Her regular weight was 169. The cervical and axillary glands were slightly enlarged, with one bunch in the left neck about the size of a lemon. The heart was negative: upper left chest was dull to percussion, with resonance impaired to base in back. Breath sounds indistinct, with a few scattering rales at margin of lung and at base. The right lung was hyper-resonant. Sputum negative for TB. Blood Wassermann negative. RBC 4,200,000; WBC 17,500; polys. 76; small lym. 19; large lym. 3; eos. 2.

X-ray picture showed a dense mass about the size of an orange in the upper left chest, apparently attached to mediastinal structures; other glands of chest were slightly enlarged. Removal of a gland from the neck for examination was requested, but refused. A diagnosis of acute Hodgkin's disease was made, and referred for X-ray therapy. She responded to X-ray treatment only slightly, although the pains were slightly relieved. Her blood picture remained about the same. WBC 18 to 20 thousand; polys. 66 to 78 per cent; small lym. 17 to 20 per cent; large lym. 3 to 11 per cent. The blood platelets were not found increased at any time.

At the end of six months of X-ray treatment, her superficial glands were slightly smaller, but the mass in the chest was larger. Symptoms were worse, that is, cough, pain, shortness of breath, expectoration and inability to retain food. Her weight had gone from 140 to 107 pounds.

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In December, 1922, she was referred to Dr. Burnam for radium treatment, at which time the diagnosis of acute Hodgkin's was confirmed. The first radium treatment produced a severe reaction, and a drop in WBC to 9,450, but this soon rose again. By April, four months under radium therapy, patient had put on ten pounds in weight and was much improved in every way. Late in the summer she began to fail again and gradually went downhill, going from bad to worse until she died in January, 1924. This patient ran a high leucocyte count all the way through from 17,000 to 22,000. Her small lym. were low, 16 to 20 per cent. Blood platelets were not increased at any time.

Analyzing these cases, two were secondary cancer of the lung, two were probably primary of the lung, two were Hodgkin's disease, with pulmonary manifestation. Only one of the four cases of cancer was under sixty years of age. The two cases of Hodgkin's disease were between thirty-three and thirty-eight years of age. All of the cases gave a history of cough, pain in the chest, shortness of breath, general weakness and a rapid loss of weight when the pulmonary symptoms began. Four of them spat blood sometime during their illness, early in three cases. Four of them had fluid in the chest which required aspiration; three had bloody fluid. In the secondary cancer cases there were pronounced physical signs on both sides. In the primary cases and the cases of Hodgkin's disease, the pronounced signs were confined to one side. Of the two cases of Hodgkin's disease, one was acute and the other chronic. The chronic case did well under irradiation and general treatment and lived over seven years. The acute case ran a short course, a little over two years, according to her history. I judged by the clubbed nails when I first saw her that she had had the disease for some time. Irradiation did her but little good, except for short periods of temporary relief.

I ask for a closer study of these cases, endeavoring to make a correct diagnosis as early as possible. In cancer, for the prognosis, there is but little we can offer as yet. Surgery may have something in store. In Hodgkin's disease, with an early diagnosis, and with proper care and treatment, I believe their usefulness and longevity may be greatly increased.

I wish to thank Miss Jessie Franklin, of the Tuberculosis Clinic, and Mrs. W. A. King, of my office, for compiling these statistics.

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Medical Arts Building.

ASPIRATION OF STEARATE OF ZINC POWDER IN INFANCY.*

By COURSEN BAXTER CONKLIN, B. S., M. D., Washington, D. C.

In view of the fact that this form of accident occurring mostly among children is unfortunately relatively common, cases as they occur should be placed in medical literature so that intelligent action may be taken to reduce their frequency. A recent report by a Committee on Accidents from Zinc Stearate appointed by the Board of Trustees, American Medical Association, as printed in the *Journal A. M. A.* March 7,1925, showed 131 cases of poisoning with 21 per cent of fatalities. A group study was made by Heiman and Aschner in which the clinical manifestations occurring in twelve cases were summarized. From their observations the onset in every case is stormy with rapid respiration and some cyanosis. Asphyxia may occur. One patient died within twenty-four hours with signs of a fulminating pnuemonia. The chest upon examination revealed diffuse crepitant rales. There was often physical evidence of an extensive bronchopneumonia. The usual history obtained is that a child is given a box of stearate of zinc to play with. The free flowing powder spilled on the face is followed by inhalation.

Meltzer and Kline gave a summary of their work in animal experimentation. The powder was passed into the trachea of an anesthetized dog my means of a sterile rubber tube with a Devilbiss bulb. The dogs generally seemed ill for a day or two. There was loss

*Read before George Washington University Medical Society.

of appetite and temperature of 101° to 105°, some developing a brassy cough. Three dogs were killed three days after insufflation; two dogs after five days; one dog after ten days. The lesions resembled a bronchopneumonia with what might be termed an interstitial pneumonitis. An interesting discovery was that the lesions resulting from insufflation of talcum powder were found to be the same only of lesser degree.

Report of Case

Baby R., aged fifteen months, at 5 P. M. obtained stearate of zinc powder which was loose in a pasteboard box. The uncle of the child who is employed in a drug store had brought the powder home in bulk. When seen by the parent vast clouds of the powder were coming from the mouth with each expiration. The child was immediately taken to a hospital where its mother said a stomach tube was used and she was then advised to take the child home, with a statment that "it would be all right." When I was called the child was breathing rapidly with the typical expiratory grunt which accompanies pneumonia. There was marked dyspnoea. Despite remedial measures death occurred at midnight.

Since the type of container that is usually in use did not figure in this case it would seem that the organized effort toward the prevention of these accidents should be directed not only toward the modification of the present typical containers but also should be directed against careless handling of the loose substance.

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500 *Medical Science Building.*

A SIMPLE METHOD FOR ELEVATING THE DEPRESSED ANTERIOR METATARSAL ARCH.

By BERNARD H. KYLE, B. S., M. D., F. A. C. S.,
Lynchburg, Va.

Numerous patients have consulted me with reference to pain and discomfort about the ball of the foot. Examination of these cases have shown that they were suffering either from metatarsalgia, Morton's neuralgia, callous warts or discomfort in this region of the foot. Most of these patients were wearing an improper type of shoe or, if the proper type, the shoe did not fit the foot, while in a few cases no fault could be found with the shoe. For sometime an impression of the foot was made on cardboard indicating just where the lift should be, and from this an oval lift was made on an inner sole. It was found necessary to change this lift frequently as to height and location, obtaining results in but a few cases. It was also noted that such appliances placed inside of the shoe to elevate this arch threw the dorsum of foot against the shoe causing pressure in this region. Finding this unsatisfactory a metal bar was used, one-eighth of an inch thick and one-half of an inch wide, which was soon found not to give enough lift. It was difficult to hold the bar in place and it usually ruined the shoe. When Jones and Lovett's Text-Book on Orthopedic Surgery came from the press, a shoe with a metal bar screwed to the sole was observed on page 666, figure 665. It was very evident that if this bar was of the proper thickness it should give the proper lift, but here the difficulty arose of having such a bar at hand to fit all sizes of shoes and give all variations of elevation.

The idea was then conceived that it would be a very simple matter to make this lift of leather and fasten the same to the sole of the shoe. The next patient who came into the office requiring a lift stood in the proper type and properly fitted shoe. A pencil mark was made to locate the head of the first metatarsal bone on the inside of the shoe and the head of the fifth metatarsal on the outside of the shoe. The shoe was then removed and these two points connected by a straight line on

Sole of the shoe showing shoe wedge.

the sole of the shoe. This line of course indicated the anterior metatarsal joint line of the foot. A line was then drawn posterior an inch and a half and parallel to the first line. The shoe was sent to the shoe repair

shop where the lift, as shown in the photograph, was made in a very short time. After the lift has been properly designed it is merely a triangular wedge which prolongs the sole backwards and shortens the shank. When the shoe is placed on a perfectly smooth surface the only part which comes in contact with the surface is the heel and apex of the lift, the sole clearing the surface at the toe about one-half of an inch. It is very important that the heel be perfectly level allowing the apex of the lift to touch along its entire border, thereby preventing any rocking or unevenness in walking. The amount of the lift depends largely on the comfort of the patient and not infrequently it is necessary to increase or lower the lift just a trifle.

Lateral view showing shoe wedge.

When the patient stood in the shoe the metatarsal arch was elevated, allowing the toes to drop. After wearing the shoe for two days the patient returned relieved of all discomfort. Such a lift has been used on about thirty cases with good results in all cases. The lift may be used for the following conditions:

First, Metatarsalgia.

Second. Callous under anterior arch.

Third, Fracture of the toe.

Fourth, Paralytic feet with depression of the anterior arch and dorsally flexed toes (selected cases).

Fifth, Following operations for hallux valgus. For the latter condition I have had this bar placed on the shoe prior to operation and have been able to get these post-operative cases up and allowed them to walk with comfort at the expiration of the third week.

Medical Building.

BILATERAL TUBAL PREGNANCY.

Report of a Case

By W. R. BRACEY, M. D., Richmond, Va.

Very few cases of bilateral tubal pregnancy are reported. Jordan and Bigger (VIRGINIA MEDICAL MONTHLY, May, 1925), in reporting a case, state that only about twenty-seven cases other than their own are on record. Dr. Thomas H. Russell, of New York, tells me he has had one case.

My case was twenty-eight years of age, one child five years old. Onset was six weeks before admission to hospital, with sharp pains in lower right quadrant lasting for four hours. These attacks were first one week apart, later becoming more often and variable in duration. Patient is nauseated and feels weak after the pain begins. She had a bloody vaginal discharge for the entire six weeks, more profuse at some times than at others. She did not complain of any pain in the left side (left lower quadrant).

There was no history of having missed a menstrual period. The right tube had ruptured. It was about the size of a duck egg, containing a well organized blood clot. There was a large amount of blood with clots in the peritoneal cavity. No embryo was found in the clot in the tube nor were chorionic villi. I think they probably suffered resorption. The left tube was size of an egg, the blood clot very firm and organized. This was not ruptured. The clot was removed and was conical in shape. The embryo and chorionic villi were absent in this also, presumably having undergone resorption under pressure of the clot and age of the organization.

The right tube being about twice the size of the left would suggest that there may have been some difference in the ages of the two pregnancies. The ovaries were not examined for copora lutea; therefore, I have no information as to whether the two eggs came from one or both ovaries.

I presume the gestations must have been of about ten weeks' duration, as the symptoms had been present for six weeks before operation. It seems to me that the right side was the older in that it was ruptured and twice the size of the left.

2301 *West Grace Street.*

REPORT OF A CASE OF FUSO-SPIRILLARY INFECTION WHICH DEVELOPED DURING ACTIVE ARSPHENAMINE TREATMENT.

By JOHN A. HILLSMAN, M. D.,
and
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Richmond, Va.

One of us reported the treatment of Vincent's angina and trench mouth with the intravenous injection of tartar emetic,[1] at which time there seemed to be a very definite idea that salvarsan was a specific. At variance with that view, we wish to report a case that seems not to bear out such theory. In confirming our observations, Sutton reports the development of Vincent's angina during active "606" treatment. Our case history follows:

Mrs. H., white, female, age twenty-eight, was admitted to City Jail Hospital at Richmond, Va., for treatment as a morphine addict. Examination at the time was negative except for carious teeth and a positive Wassermann. Patient was given sudden withdrawal treatment, and in a few days put on old arsphenamine. Three decigrams intravenously were given on each of the following dates, January 17, 24, 31.

On February 1, patient reported to interne, complaining of intense ear-ache, sore throat and mouth. Examination at this time revealed an intensely swollen face on the right side, swelling extending well down into the neck; whole side of face was exquisitely tender, ear drums were normal, breath extremely foul, mucous membrane of mouth was reddened, gums were spongy and inflamed, with recession from the teeth, and bleeding spontaneously. Pain on opening mouth was intense, and no examination of throat was possible. Temperature at this time was 103 F., pulse 130, respiration 18. Cultures for diphtheria were negative, but smears showed upon three consecutive examinations the bacillus fusiformis, and spironema Vincentii.

Recognizing the significance of the development of this disease during salvarsan treatment, further investigation was made by carefully cleansing of the mouth and applying locally neo-salvarsan. On the day following, the temperature, pulse, and respiration remained the same, face and neck were still markedly swollen and tender, ear-ache still persisted, and the mouth was in much worse condition, with dark necrotic areas appearing. Teeth were loose and painful, with a very foul breath. Application of neo-salvarsan was made. That afternoon the patient had a hemorrhage from the mouth, and lost about two ounces of blood. Fearing to try salvarsan any longer, the patient was given 5 c.c. of 1 per cent tartar emetic intravenously. No reaction was noted. On the following morning, the temperature was 101 F., pulse 95, respiration 18. All ear-ache had disappeared, face and neck markedly reduced, and tenderness had disappeared from the swollen area. Examination showed a mouth well on the road to recovery. The breath was not so foul, mucous membranes not so inflamed, gums not so boggy, and no bleeding. Teeth were much firmer in their sockets. Throat was examined for the first time; tonsils and fauces were seen to be inflamed. Cultures from the tonsils showed abundance of streptococci, but no Vincent's organisms.

On February 3, patient was given intravenously 6 c.c. of 1 per cent tartar emetic solution. The next morning again showed marked improvement in both the subjective and objective symptoms. On February 4, tartar emetic was given in dose increased to 7 c.c. 1 per cent solution. No reaction was noted and the patient steadily improved.

On February 5, tartar emetic was given, the dose now being 8 c.c. of the 1 per cent solution. Smear taken this day was negative for Vincent's angina. On February 6, 10 c.c. of the 1 per cent solution was given, following which the patient became nauseated but did not vomit, and was faint. One c.c. of adrenalin (1:1000) appeared to relieve the symptoms immediately, but patient refused to take any more injections. For four days there was nothing done for the mouth and examination at that time revealed a normal mouth as far as Vincent's angina was concerned, and all smears were negative.

Summary

Patient developing Vincent's angina on day following third injection of salvarsan in as many weeks does not speak well for intravenous salvarsan as a cure for the disease. Local cleansing, followed by application of neo-salvarsan, did not bring any change for the better in this case, and, further, brings suspicion on salvarsan as a cure for Vincent's angina, either locally or intravenously. Rapid improvement of this case coincident with the in-

travenous use of tartar emetic seems to point to the efficacy of this treatment.

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Medical Arts Building.

NON-INFECTIOUS LEUCOCYTOSIS, ITS SIGNIFICANCE AND TREATMENT.*

By G. G. HOWERY, M. D., Christiansburg, Va.

In presenting this most important subject, I shall endeavor to do so from the standpoint of the general practitioner rather than that of the laboratory technician or internal medicine man.

In the November, 1924, issue of the *Medical Clinics of North America*, Dr. O. H. Perry Pepper, of the University of Pennsylvania, presented a most excellent paper on Non-Infectious Leucocytosis, and to him I am indebted for the most important data I have been able to collect on this subject.

Until recently it had been my idea that leucocytosis was only to be associated with infectious processes, and not until it was brought very forcibly to my attention in non-infectious cases did I come to realize that it was possible to have a non-infectious leucocytosis, or one of traumatic origin. I hope later on in my paper to cite a few cases which will illustrate my point.

Doubtless we will agree that the chief function of the leucocyte is that of protection, but just in what manner this protection takes place has not been definitely explained. We know that certain infectious processes, especially those due to pyogenic organisms, will cause a definite increase in the white cell count, provided, however, the hosts shows sufficient resistive power, and we usually explain it on a chemical basis, *i. e.*, during the process of digestion by the organism, a specific enzyme is elaborated by which the white cells are drawn, especially the neutrophils, but when we find a marked leucocytosis where there is no infection it is hard to explain on such a basis. What little we do know of the leucocytic function suggests that it is protective against pathologic dangers.

The so-called normal leucocyte count of 7,500 is not absolutely constant, and is subject in a normal individual to many slight variations in the twenty-four hours, these being known as physiologic variations.

Physiologic leucocytosis occurs in the new-born, latter weeks of pregnancy, during labor, during digestion, after cold baths, etc. It is true that this is not very marked, rarely exceeding 13,000, and much help may be gained by a differential count.

In the new-born infant the count may be over 20,000, which by the end of the first week has settled to between 10,000 and 12,000. During labor the count rises abruptly to 20,000, or even 30,000, dropping to normal within a few days in uncomplicated cases.

Leucocytosis may result from disturbed blood flow or from altered blood volume, and this may in the final analysis be the mechanism by which many of the physiological leucocytoses are produced. The leucocyte count will be increased by slowing of the blood stream whether due to local stasis or to failure of the general circulation. Severe acute circulatory failure, coronary thrombosis, and paroxysmal tachycardia may be accompanied by a leucocytosis.

A great variety of organic substances are known to produce leucocytosis, very slight in most instances, but worthy of note. Included in this list are such substances as the following: Adrenin, nuclein, collargol, turpentine, camphor, antipyrin, phenacetin, digitalis, pyradon, pyrogallol, benzol derivatives, arsphenamin and long continued chloroform narcosis. Leucocytosis may also occur in certain diseased conditions in which there is apparently no infection present as, for example, uremia, also the occurrence of a leucocytosis following an apparently clean operation which might cause unnecessary worry unless its real nature was appreciated.

This slight leucocytosis following an operation might apppear quite considerable if there had been a normal count recorded previous to the operation.

Another type of leucocytosis, non-infectious in character, appears after a hemorrhage, especially that following a hemorrhage into the peritoneum, the pleura, the intradural space or a joint cavity; in such cases the count may rise to 20,000 or 30,000. The peak is reached in about ten hours after the hemorrhage and persists four or five days. From a practical point of view the hemorrhage into the peritoneal cavity is probably the most important.

In twenty-eight cases of ruptured ectopic

*Read before the Southwestern Virginia Medical Society, at Pulaski, Va., March 26-27, 1925.

pregnancy reported by Wright and Livingston, the average leucocyte count during the first day was found to be 20,000; and it will take but an instant to appreciate how readily such a count in a case of an acute abdominal condition might lead the physician or surgeon to an erroneous diagnosis, mistaking the real condition for one of an acute intra-abdominal infection. So also is the importance of the leucocytosis which seems to be a constant accompaniment of an intradural hemorrhage. Wright and Livingston go so far as to say that the absence of a leucocytosis in a case with cranial injury excludes the possibility of fracture at the base of the skull.

In the various forms of post-hemorrhagic leucocytosis, it appears that the degree of leucocytic increase is not always proportional to the amount of bleeding. The counts which occur in a moderate amount of intradural hemorrhage are far higher than those occurring in a massive external hemorrhage. In external hemorrhage it would seem that the actual loss of blood must be the determining factor, although an element of absorption from the point of bleeding may be present.

On the other hand, the higher counts from bleeding into a serous space would seem to be due largely, if not wholly, to the absorption of some substance stimulating the formation of leucocytes. Certainly these cases of leucocytosis that occur, for example, in intraperitoneal bleeding, are true leucocytosis in the sense that the young immature cells enter the blood.

While on the subject of non-infectious leucocytosis, it will be well to mention that we find some increase of leucocytes in tubercular meningitis, neoplasms, and in terminal or agonal states; most of these however, are of very moderate degree.

The differential count should not be overlooked, as the importance of leucocytosis cannot be fully estimated without observing the differential count. This is especially true in the differentiation of the infectious from the non-infectious leucocytosis, such as we are now considering. In a clear-cut case of active infection where one count has, for example, been 15,000 cells with 85 per cent of them neutrophils, a later count of 20,000 may need no differential count to reveal its full significance. On the other hand, there are many instances in which a very slight leucocytosis with, however, a markedly increased percentage of neutrophils, may be far more indicative than a higher total count with a normal or almost normal differential picture.

Physiologic leucocytosis is often not associated with any change in the differential count, while the reverse is the case where infection is the cause of a leucocytosis. It then should be clear that a differential count should be made in every case of leucocytosis even to a slight degree.

With increasing knowledge of the specific function of the various forms of leucocytes, we may better understand the meaning of one of the other forms, and above all it should remain firmly fixed in our minds that it is not always of an infectious origin, as it may occur from a variety of other causes.

Before entering upon discussion of the cases, I want to offer an apology for considering the treatment of these cases in a paper of this nature, but in view of the fact these patients were in extremis and the results were so favorable, I have thought it would be of interest to at least some of you to have a brief review of the treatment, etc.

The following cases were handled surgically by Dr. A. M. Showalter, at the New Altamont Hospital, Christiansburg, Va.:

Case No. 632.—Mrs. A. T., age forty-four, married, housewife. Admitted February 9, 1925; discharged March 4, 1925. Admitted in a severe state of shock, with a blood pressure of 55 S., and 50 D., and with a history of having been suddenly awakened at 3 A. M. on above date with a severe, stabbing pain in left lower abdomen. Rapidly became worse, and was brought to the hospital at 2 P. M., on the same date. A blood analysis at 9:30 A. M. showed 16,800 white cells, 4 per cent small lymphocytes, 1 per cent large lymphocytes, 1 per cent transitional, and 94 per cent polynuclears. At 3 P. M., one hour after admission, white cells were 18,000, small lymphos. 6 per cent, transitional 1 per cent, and polys. 93 per cent. At 4 P. M. patient was given 500 c.c. of undiluted blood, intravenously, and the blood pressure raised to 95 S. At 7:30 P. M., when she was operated on under local anesthesia, the bleeding points were ligated, mass removed, corroborating initial diagnosis of ruptured left ectopic pregnancy. Normal salt solution was given intravenously during the latter part of operation, when a small amount of ether also was used. Immediately following the opera-

tion, 750 c.c. of blood was given by transfusion. Patient rapidly improved following the second transfusion, and made an uneventful recovery. The blood analysis on the 19th of February, ten days later, showed a white cell count of 7,800, with 16 per cent small lymphos., 2 per cent large lymphos., 4 per cent transitional, and 78 per cent polys.

Case No. 504.—Miss I. M., age twenty-three, single. Admitted July 5, 1924, and dismissed July 17, 1924. She was admitted with a diagnosis of ruptured right ectopic pregnancy. Blood pressure 100 S., 60 D., with a history indicating that she was feeling as well as usual until 4 P. M. of July 4, when she was taken with a severe pain in the right lower abdomen, followed by an extreme state of shock, although, as physical examination indicated, she had somewhat reacted at the time of admission into the hospital. A blood test on admission, eighteen hours after initial attack, showed 17,000 white cell count, but no differential count was made in this case. Operation under ether anesthesia at 1:50 P. M. corroborated diagnosis; mass was removed, and all bleeding points ligated. No further examination was made of the blood while patient was in the hospital, though, like the former case, she made a rapid and uneventful recovery.

Case No. 592.—Master C. S., age thirteen, single, school boy. Admitted to the hospital November 25, 1924, and dismissed December 11, 1924. Admitted 7 P. M., November 25, unconscious and paralyzed completely on left side, with a considerable discoloration over both eyes, and a fluctuating mass over right parietal region of scalp. History indicated that at 4 P. M., November 25, 1924, he was found lying unconscious in the road not far from home, apparently having been thrown by a horse he had been riding. Analysis showed the white cell count was 20,000 on admission, 7 per cent small lymphos., 1 per cent large lymphos., and 92 per cent polys. Spinal fluid test showed white cell count of 750, red cell count 12,400, and a positive globulin. A diagnosis of fracture of the right parietal bone was made, with a subdural hemorrhage. Operation under ether anesthesia was made at 9:15 P. M., on the above date, when the clotted blood was removed. Wound was closed with drain beneath the dura and also between the dura and skull. Patient made an uneventful recovery, there being no further blood tests made.

Case No. 633.—Master P. L., age sixteen, single, male. Admitted February 15, 1925, and dismissed March 11, 1925. Patient was admitted to hospital at 3:30 P. M., with a history of being shot at 2 P. M. by another man, incident to a "drinking spree." Records do not show what the blood pressure was at this time, as the patient was in an extreme state of shock, and was vomiting blood at frequent intervals. A blood test made on admission showed white cell count of 19,500, 10 per cent small lymphos., 1 per cent large lymphos., 1 per cent transitional, and 88 per cent polys. Four days later blood test was made, with a white cell count of 6,300, 23 per cent small lymphos., 3 per cent large lymphos., 2 per cent transitional, and 72 per cent polys. Patient was operated on under ether anesthesia at 7:30 P. M., on date of admission, and bleeding points ligated and openings closed, which operation revealed the fact that the bullet had passed through the left lobe of the liver, cutting one of the hepatic veins near the inferior vena cava, then passed through the lobus spigelii, cutting a hole in the pyloric end of the stomach, passing between the aorta and inferior vena cava, cutting one of the veins of the right kidney, then passing out. Patient was given salt solution intravenously during operation, and 750 c.c. of blood by direct transfusion method immediately after operation. Patient made an uneventful recovery, except that the abdominal wound healed rather slowly, and was discharged March 11, 1925.

Conclusions

As far as the above reports show, there was a marked increase in the white cell count immediately following the injury; none of these cases were infected; and in those cases where the blood tests were followed up, a marked reduction occurred in all instances, thus corrobating the idea that a leucocytosis with a high polynuclear count may come from some other cause than infection.

DIET DURING PREGNANCY. ESPECIALLY ITS MODIFICATION IN THE PREVENTION OF TOXEMIA.

By W. I. PRICHARD, A. B., M. D., Petersburg, Va.

That a purely physiological process should so frequently develop serious and distressing pathological phases is one of the unsolved problems in scientific medicine. We conclude that it must be one of the penalities women

pay for having ascended so high in the scale of evolution.

Toxemia is a term which has obtained very general usage, though little is known about the condition it represents. It is generally accepted to mean that the blood contains toxins or poisons, but their nature we do not understand. These toxins are supposed to be the result of deficient or abnormal general metabolism, or morbid processes occurring in special organs, as the liver, the kidneys, the thyroid; again, the poisons are supposed to come from the fetus or the placenta, a deranged chemism occurring here. As a result of the deficient action of some organs of the body, for example, the liver, the kidneys, the thyroid, and, perhaps, some of the ductless glands, these poisons are retained in the body, or they are not sufficiently oxidized or changed as to be rendered harmless and eliminable.

Such is the general theory of etiology. To explain why and how these changes originate there are other theories, but a discussion of these is not within the scope of this paper.

The writer desires to review some general features concerning diet during pregnancy, and diet as related to the toxemias met with in pregnancy, which are wholly caused by the pregnant state; namely, that of the earlier part, or hyperemesis gravidarum, and the latter part, eclampsia—more especially as related to the early pre-eclamptic state.

In prenatal work there is no subject of greater practical importance than the nourishment of the pregnant woman. Yet, apparently, nobody until very recent years has given the subject any definite thought.

There are reasons for believing that the appetite of the ordinary healthy human being is a reasonable guide to the selection of his food. The question naturally arises: "Does pregnancy so alter the conditions of the body that the appetite of the individual is no longer a safe guide?"

In reviewing the literature on this subject one does not find any record of a systematic study by our obstetrical clinics. Until the larger clinics direct their attention to this matter, our ideas on this important subject must be derived, in the greater part, from the physiologists and their animal experimentations. By animal experimentation we are able to study the various phases of metabolism in pregnancy, because of the shorter duration of pregnancy in animals, and because it is possible to keep an animal on a fixed diet throughout the entire period.

There is a similarity of conditions between the human and the animal during pregnancy; for instance, the dog has the same period of negative metabolism and vomiting is not infrequent. The question is often asked: Do dogs, rabbits, rats, etc. require more food during pregnancy? According to the physiologists, they do not. Gammel,[1] in his extensive experiments in the feeding of animals in the pregnant state, concludes that in the earlier part "catabolism has the upper hand, and it is impossible to overcome this by heavier feeding." In reviewing the experiments of Hagerman, Jageroos, and Bar, Murlin writes: "Upon an adequate diet a dog in pregnancy may retain more than sufficient nitrogen to counterbalance, plus the quota taken up by the uterus and mammary glands."

From these reports of the physiologists it is concluded that under normal conditions, and a normal diet, which has been sufficient for the woman in the non-pregnant state, the fetus will grow, taking its nourishment from the mother's food and only selecting those substances in sufficient quantity for normal growth, and, because of this selective process by the placenta, a specific diet will in no way effect the fetal growth. Professor Bueffner, of Rostock, who has written, perhaps, the most logical paper on diet in pregnancy, draws the same conclusion, that the normal diet is sufficient in quantity.

The idea among the laity that the pregnant woman needs more food than before pregnancy is true only if she is doing her work at the time. This factor, however, like that of climate—warm or cold, habits—athletic or sedative nature, and certain hereditary tendencies, are conditions that deserve special consideration, as they would in the normal state.

Physiologists agree that the important consideration in the diet of the pregnant woman is the quality. It must contain the principal elements of food; namely, albumin, carbohydrates, fats, water, and salts. Of the salts, lime, sodium, phosphorus, and salts of iron are the most important. As to fluids, it is conceded that the quantity should be increased in consideration of the amniotic fluid and the fact that the fetus contains 60 per cent water.

No discussion of diet during pregnancy seems complete without mentioning the Prochownick diet. The writer desires to discuss this briefly, because of its bearing on the eclamptic state. This diet was instituted in 1889, and has been used by many prominent obstetricians. In substance it is a high protein, low carbohydrate and reduced fluid diet used during the last six weeks of pregnancy the object of which is to reduce the fat of the fetus and mother in cases of moderately contracted pelvis and in women giving birth to large infants. It was not claimed by the author that this diet altered the size or character of the bony structure of the fetus, as some have interpreted. Animal experimentation yields no scientific background for this latter interpretation. (I refer to experiments on cattle with lime salts).

Prevalent views as to the value of this diet are contradictory. To quote some:

E. P. Davis: "Diminution in the mother's food is not followed by a corresponding diminution in the size of the foetus, because the foetus is a parasite and persists in thriving at the expense of the mother."

De Lee: "Prochownick hoped to restrain the growth of the child and also retard the ossification of its bones, so that it would mold easier through the pelvis. My few experiences with it have been absolutely negative."

Polak: "Diet has a decided influence on the child. Adherence to the Prochownick diet will result in a small foetus, in which the plasticity of the cranial vault is increasing."

Williams: "In slight degrees of pelvic contraction, or in patients who have given birth to excessively heavy children, a restricted diet may be advisable during the last two or three months of pregnancy."

Edgar: "The large proportion of nitrogenous food and small quantities of fluid of this diet undobtedly favor toxemia."

In view of the divergence of these opinions and the possibility of this diet favoring toxemia, it would seem more desirable in this type of case to use an obesity or modified obesity diet, as advocated by Day, of Boston: that is, one which is bulky, largely vegetable, and low in caloric value.

Perhaps the most significant indications for a modification of diet during pregnancy are those rendered by an ensuing condition of pernicious vomiting in the first trimester of pregnancy, or the pre-eclamptic state in the latter part.

When the ordinary vomiting of pregnancy progresses to such a stage that the well-being of the individual becomes a matter of concern, when there is persistent vomiting and retching, with an appreciable increase in pulse rate and signs of emaciation beginning; attention is directed to the diet. In general, there has been advocated a carbohydrate diet, administered at frequent intervals. Polak's recent expression on this subject reads thus: "Force a carbohydrate diet; encourage them to eat solids with plenty of sugar, eat lots of candy," etc.

This manner of diet was instituted as a result of the work of Duncan and Harding in 1918, Harding in 1921, Titus in 1920, and Lynch in 1919. All conclude that the toxin involved is metabolic in nature and origin and is due to the increased demand for glycogen on the part of the fetus. The maternal organism may be successful in meeting this demand or it may fail more or less. The time of day when the maternal organism may be most reasonably expected to be least able to meet this demand is after a period of starvation, and the longest period is between the evening meal and breakfast of the following morning; this explains why so much of the vomiting of pregnancy manifests itself in the morning hours. The placenta is not physiologically able to store glycogen until the third to fourth month, hence during this period the fetus must depend on the maternal organism for its supply.

Williams, however, in the latest edition of his text-book brings this matter up-to-date, concluding that ,the cause is a "toxic substance," and whatever may be said of the etiology of hyperemesis is largely hypothetical and may be subject to revision at any time. He advocates a restricted diet.

The remaining condition the writer wishes to consider in which diet is altered is the pre-eclamptic state.

The cause of eclampsia, like that of hyperemesis is still an undetermined question. According to Williams, it occurs in 1 to 130 pregnancies, Crogin, 1 in 79, New York Lying-in Hospital, 1 in 185 cases. It is about twice as often in primipara as multipara, more frequent antepartum than postpartum, and the greatest number occur between the ages 20 and 25. It is the pre-eclamptic state we are here interested in, for at this period it is possible

XUM

that eclampsia may be averted. Attention is directed to the diet, for the nitrogen distribution of the urine indicates a disturbed protein metabolism, and the functional capacity of the kidneys is greatly reduced. Hence, in the presence of an ascending blood pressure, beginning headache, disturbance of vision, or albuminuria, or any one of the symptoms or signs, a modified diet is instituted. To quote some of the latest expressions on this subject:

Polak states: "In our pre-eclamptics they are first put at rest on a milk diet, and kept on that until their pressure has come down and their albumin diminished, at which time they are allowed vegetables, except peas and beans, fruits and cereals."

Hirst: "My routine advice to patients is to eat meat once a day and in moderate quantities, then red meat only three times a week, and fish to be substituted for meat once a week at least: nothing nutritious between meals: never more than two eggs a day, and moderate quantities of the stronger proteid vegetables, corn, beans and peas; at least five whole glasses of water a day, one just before going to bed and one on rising in the morning."

Williams: "We place the women upon an exclusive milk diet, but, if they will not stand it, upon a very low protein one."

De Lee: "As to special diet for pre-eclamptics, our views are undergoing changes constantly. We have not been successful with the absolute milk diet, nor with the vegetable and water diet, nor with the absolute non-protein diet, nor with the salt-free diet. At present, we are compromising and give the women a restricted protein diet and salt-poor diet."

Conclusions

1. That an adequate diet for a woman in the non-pregnant state is adequate during the pregnant state, provided due consideration is given her degree of activity, hereditary tendencies, climate, etc.

2. That the advantages claimed by the use of the Prochownick diet can be secured by other forms of diet less apt to produce toxemia.

3. In conditions of threatened hyperemesis, since the theory of glycogen deficiency ceases to hold is former prestige, a plain easily digestible diet is growing in favor.

4. In the pre-eclamptic state, because of the urinary findings, the disturbed nitrogen distribution, the reduced functional capacity of the kidneys, and the pathology found in these cases, a restricted protein or milk diet continues to be form of choice.

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Day—Boston, Mass., Text-book and Letter.

Market Street.

A CASE OF BONE TUMOR.

By J. B. H. WARING, M. D., Blanchester, Ohio.

Mrs. E. B. H., aged forty-five, married, American. Previous medical history negative. Consulted in regard to a symmetrical enlargement of the proximal phalanx of the right index finger, of about three years' duration. Dating from a rather obscure history of having struck this finger on some hard object, the finger had slowly enlarged in this phalanx until the deformity had become quite noticeable. In addition to this, inability to flex the finger to any extent caused her considerable trouble in her household duties. As expressed by the patient, she was "always hitting it on something;" and when out in cold weather she found it increasingly difficult to use an ordinary sized glove on that hand. She was very sensitive about appearance of the finger; and much worried as to possibilities. At times there was a dull pain in the finger, but as a rule merely a slight degree of tenderness on pressure over the swollen area. Careful examination failed to elicit any external evidences of inflammation, the skin being smooth and perfectly normal in appearance, and no periosteal nodulation felt on palpation.

Patient felt that something had to be done about the finger, but was very anxious to save it if possible. She expressed the hope that the bone might be chiseled down to normal size, and the finger preserved in useful condition.

Patient was sent to Dr. A. H. Freiberg, of Cincinnati, orthopedic surgeon, for consultation and opinion. Doctor Freiberg concurred in a diagnosis of bone tumor. The roentgeno-

gram is herewith, cystic in structure, and in all probability a giant-celled intraosseous growth. Enucleation was also advised.

Operation was performed under general anesthetic at request of patient, who was very nervous, and felt she could not stand a local anesthesia amputation. In order to satisfy the patient's wish for preservation of the finger, if there appeared to be any possibility of this, an exploratory incision was made along the shaft of proximal phalanx and carefully dissected. On opening through the periosteum, however, the scalpel broke through into a mass of honeycomb-like bone cells filled with a jellylike material. On further exploration it was found that the entire shaft of this phalanx was of similar structure, the whole being confined up to this time by a slowly thinning periosteum. Amputation was therefore a necessity; not only because there was no healthy bone left in the shaft, but more so because of possible malignancy and metastasis elsewhere. From the condition of shaft, it was apparent that strong digital pressure, or a slight accidental blow would have easily fractured the bone.

Amputation of the finger was effected at the metacarpophalangeal articulation, and as the head of the metacarpal bone appeared perfectly normal, with no evidence of any extension of the process outside of the involved phalanx, the wound sutured without drainage. Primary union was obtained. Unfortunately the amputated finger was thrown into furnace refuse by a nurse, and pathologic laboratory confirmation of the clinical diagnosis was unobtainable.

109 *East Main Street.*

Correspondence

Plagiarism.

New York, N. Y.
July 28, 1925.

To the Editor:

In the January, 1922 issue of your valued Monthly, you were good enough to publish a paper which I had read by invitation before the Norfolk County Medical Society, on October 31, 1921, entitled "Urologic Problems of Interest to the General Practitioner."

You may imagine my surprise when I recently read in "*International Clinics*," published February, 1925 by the J. B. Lippincott Company, a paper purporting to have been written by Dr. Thomas M. Dorsey and Dr. Rudolph Monaco, both of Louisville, Ky., this paper being an exact copy of my article which you published except for a few minor changes of a word here and there. Their article is entitled "Some of the Urologic Problems Most Frequently Encountered in Daily Practice."

In order that you and your readers may more readily appreciate the true nature of the plagiarism thus committed, I enclose herewith photostatic copies of the first three pages of my article (from my reprints) and the first three pages of the article in "*International Clinics*" ascribed to Drs. Dorsey and Monaco. If space permitted, it would be interesting to publish both articles complete in parallel columns and the result would be startling indeed, for it would be seen that my original article was taken bodily and reproduced as an original contribution in "*International Clinics*," word for word, line for line, paragraph for paragraph, with but a few minor changes of verbiage, as the accompanying sample pages will readily show.

The alleged authors, Drs. Dorsey and Monaco, make no suggestion or intimation of any kind in their article that the matter is not original with them, but add insult to injury by deliberately deleting my name from the body

Reprinted from the Virginia Medical Monthly, January, 1922

UROLOGIC PROBLEMS OF INTEREST TO THE GENERAL PRACTITIONER.*

By ABR. I. WOLBARST, M. D., New York, N. Y.
Genito-urinary and Chief of Urologic Clinic, Beth Israel Hospital, Consulting Urologist, Manhattan and Central Islip State Hospitals, Genito-Urinary Surgeon, West Side Dispensary and Hospital, etc.

A study of all the urologic problems that confront the general medical practitioner would take more time than I am permitted to consume, but a few of the most urgent can be considered rather briefly with profit to our patients and ourselves. These problems owe their being primarily to the fact that the urologic tract is so situated anatomically that the usual methods of physical diagnosis—palpation, auscultation and percussion—are of little or no value in the determination of its pathologic conditions.

Urologic phenomena, such as hematuria, pyuria and pain in or near the genito-urinary tract, cannot be accounted for by these methods; nevertheless it is not uncommon to meet with cases that have been treated for long periods of time without a definite diagnosis, or in fact, a serious attempt at a definite diagnosis having been made.

Perhaps the most flagrant example of this unfortunate practice is to be seen in those innumerable cases in which a diagnosis of cystitis has been made and bladder irrigations and urinary antiseptics administered for long periods without relief to the patient. When these patients reach the urologist, as they do eventually, he probably will find the so-called cystitis merely one of the secondary symptoms incidental to the presence of a pathologic lesion of serious character, such as tuberculosis, tumor, stone, or stricture.

*Read by invitation before the Norfolk County Medical Society, Norfolk, Va., October 31, 1921.

The subject of hematuria offers a much more striking example. To the urologist, hematuria is a symptom, not a disease. It means that somewhere in or near the urologic tract an active pathologic process is going on, which is making itself evident by the presence of blood in the urine. It is no exaggeration to say that in probably forty per cent. of cases of hematuria, the bleeding is symptomatic of the presence of a tumor somewhere in the urologic tract. But the average medical practitioner always does not take the trouble to find out what is causing the hematuria or where it is located. He may put the patient to bed and

SOME OF THE UROLOGIC PROBLEMS MOST FREQUENTLY ENCOUNTERED IN DAILY PRACTICE

By THOMAS M. DORSEY, M.D.
AND
RUDOLPH MONACO, M.D.
Of the Dorsey Urological Clinic, and the University of Louisville, Medical Department, Louisville, Kentucky

A BRIEF account of some of the urologic problems most frequently encountered in daily practice may prove interesting, especially to general practitioners of medicine who are usually first consulted by patients regardless of what may be the nature of their complaints.

It may be stated at the outset that urologic phenomena, such as hæmaturia, pyuria, pain, etc., in or near the genito-urinary tract, cannot be definitely accounted for by palpation, auscultation and percussion. It is not uncommon to see patients who have been treated for long periods of time without a definite diagnosis, where, in fact, no serious attempt at a positive diagnosis has been made.

Perhaps the most flagrant example of this unfortunate practice is seen in those innumerable cases in which a diagnosis of cystitis has been made, vesical irrigations and urinary antiseptics administered over long periods, without relief to the patients. When these individuals reach the urologist, as they all do eventually, he will probably find the so-called cystitis merely one of the secondary manifestations incidental to the presence of a pathologic lesion of serious character, such as tuberculosis, tumor, calculus, or stricture.

The subject of hæmaturia offers a much more striking example. To the urologist hæmaturia is a symptom and not a disease. It means that somewhere in or near the urologic tract there exists an active pathologic process which is making itself evident by the presence of blood in the urine. It is no exaggeration to say that in probably 40 per cent. of cases of hæmaturia, the bleeding is symptomatic of the presence of a tumor somewhere in the urologic tract; but the average medical practitioner does not always take the trouble to ascertain the cause of the hæmaturia nor where it is located. He may place the

of their text on page 48, in the paragraph commencing with "The Five Glass Catheter Test." The photostatic copy shows this brazen insult very strikingly.

These alleged authors discussing the subject of pyuria says (page 48), it "will be discussed more fully, starting on page 58." It is most amazing to refer to page 58 and find an article entitled "Pyruia," by the same Dr. Dorsey and one Dr. Frank C. Bohanan, also of Louisville, Ky., which again is a verbatim copy of another article of mine which appeared in the *Medical Record* (New York) on February 12, 1922, except for a few paragraphs preceding

order an internal antiseptic or styptic, and when the hemorrhage stops, as it usually does under the influence of rest, he is apt to feel satisfied with the success of his treatment. But it is a fact, nevertheless, that he does not know what causes the bleeding, and it may be accepted as axiomatic that if he does not know the cause of the hemorrhage he surely cannot do anything that will help his patient materially.

The hematuria may not return for months,

2

or even for years, but in that interval precious time has been lost. The small benign papilloma has grown large and has become malignant; before its potential malignancy became active it could readily have been destroyed, perhaps never to return, by the Beer method of fulguration through the cystoscope; but the passage of time has brought about a change in the character of the growth so that we now are dealing with a carcinoma that may require radical measures with little or no chance of ultimate recovery. The small calculus which could have been removed from the bladder through the cystoscope, has grown to large proportions and requires surgical measures for its removal. The unilateral renal tuberculosis, amenable to surgical measures with a large degree of success, now has become bilateral, with greatly reduced chances of recovery. In other words, what was a comparatively simple matter in the beginning has been permitted to become a serious menace to the life of the patient, because a diagnosis was not made, or even seriously attempted, at the proper time.

These illustrations can be repeated with many variations, but they all point to the single moral—that in the practice of urology, at least, the first and most important problem which confronts the medical practitioner, is the absolute necessity of making a correct diagnosis. At least he should attempt it with such means as his experience and training suggest; if necessary, expert assistance must be secured.

3

But the diagnosis must be made, and the sooner it is made, the better for all concerned. We are past that stage in medicine, where a name of a clinical entity satisfies. We must know the cause. No one should be allowed to go on after an attack of hematuria without a definite diagnosis having been made by the medical attendant.

But how shall the medical attendant meet this difficult problem? He surely does not meet it by putting the patient to bed and pre

patient in bed and order an internal antiseptic or styptic; and when the hemorrhage ceases, as it usually does under the influence of rest, he is prone to feel satisfied with the success of his treatment. But it is a fact, nevertheless, that he does not know what causes the bleeding, and it may be accepted as axiomatic that if he does not know the cause of the hemorrhage he surely cannot do anything that will help his patient materially.

The hæmaturia may not return for months, or even years, but in that interval precious time has been lost. The small benign papilloma has increased in size and has become malignant; before its potential malignancy became active it could have readily been destroyed, perhaps never to return, by the Beer method of fulguration through the cystoscope; but the lapse of time has brought about a change in the character of the growth so that we are now dealing with a carcinoma that may require radical surgical measures for its removal with little or no chance of ultimate recovery. The small calculus, which could have been extracted from the vesical cavity through the cystoscope, has attained large proportions and surgical measures are required for its removal. The unilateral renal tuberculosis, amenable to surgical treatment in its early stages with a large degree of success, now has become bilateral, with greatly reduced chances of recovery. In other words, what was a comparatively simple matter in the beginning, has been permitted to become a serious menace to the life of the patient because a diagnosis was not made or even seriously attempted at the proper time.

These illustrations might be repeated with many variations, but they all point to the single moral—that in the practice of urology the first and most important problem which confronts the medical practitioner is the absolute necessity of making a correct, early diagnosis. At least he should attempt it with such means as his experience and training suggest; if necessary, expert assistance must be secured. But the diagnosis must be made, and the sooner the better for all concerned. We are past that stage in medicine where the name of a clinical entity satisfies; we must know the cause. In no case should hæmaturia, for example, be allowed to persist without a definite diagnosis as to causation being made by the medical attendant.

How shall the medical attendant meet this difficult problem? He surely cannot hope to meet it by placing the patient in bed and pre-

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the plagiarized matter, and some additional matter which they added at the end of my article.

While I fully appreciate the splendid compliment conveyed by this wholesale plagiarism of my articles by these gentlemen, all connected with the University of Louisville Medical Department and the Dorsey Urological Clinic of Louisville, I feel that such misappropriation of another's efforts should not be permitted to go unrebuked when discovered. In addition to being inherently unfair and unethical, it tends to lower the standard of medical literature and brings all medical writings under suspicion.

XUM

scribing an internal antiseptic. The ideal solution would consist in a reasonable amount of familiarity with the cystoscope and its manipulation. However, if the practitioner is too busy with his multifarious duties involving many specialties to acquire some cystoscopic experience, it is sufficient that he acquaint himself with the possibilities and dangers that confront his patient because of his limitations, and that he then act as his conscience dictates.

If he once understands the great danger in which the absence of a diagnosis places his patient, he will find the means of avoiding it. There are certain measures upon which he can rely, which will aid him in a very fair degree towards establishing a working diagnosis until the exact diagnosis can be made. Among these may be mentioned the kidney function tests, the microscopic examination of the urine, and the socalled urinary tests. Any medical practitioner can do these important tests with-

4

out the need of special training or acquired skill.

The Five Glass Catheter Test (Wolbarst), which I have described in previous publications, will be found of special value in these circumstances. It does not take the place of the cystoscope or the ureteral catheter, but it tells us whether the blood has its origin in the urethra or in the upper urinary tract, and this is a big step forward. If by this means the practitioner has determined that the blood is not derived from the urethra, but from the bladder or higher up in the urinary tract, he undoubtedly will take the necessary steps to have his patient radiographed and cystoscoped, and the ureters catheterized, if necessary, thus completing the diagnosis. His problem will be solved in a great measure if he always will remember that hematuria is a symptom, not a clinical entity; that there is no substitute for cystoscopy and ureteral catheterization, and that anything else is mere guesswork and of no substantial value to the patient.

What has been said with reference to hematuria applies with equal and perhaps greater force to the subject of pyuria, except that the problem is somewhat more complex. Pus found in the urine may have its origin in any part of the common urogenital tract, but unlike hematuria, in the male at least, the origin of the pus is in the urethra or the genital adnexa, in the vast majority of cases. In pyuria unaccompanied by definitive symptoms,

5

scribing an internal antiseptic. The ideal solution would seem to consist in a reasonable amount of familiarity with the cystoscope and the technic of its manipulation. However, if the practitioner is too busy with his multifarious duties, involving the many specialties, to acquire some cystoscopic experience, it is sufficient that he acquaint himself with the possibilities and dangers that confront his patient because of his limitations, and he may then act as his conscience dictates. When he once understands the great danger in which the absence of a definite diagnosis places his patient, he will find means of avoiding it.

There are certain measures upon which the practitioner may rely and which will aid him in a fair degree toward establishing a working diagnosis until an exact diagnosis can be made. Among these may be mentioned kidney function tests, microscopic examination of the urine, and the so-called urinary tests. Any medical practitioner can make these important tests without the necessity of special training or acquired skill.

The five-glass catheter test will be found of special value under these circumstances. It does not take the place of the cystoscope or ureteral catheter, but it tells one whether blood has its origin in the urethra or in the upper urinary tract, and this is an important step forward. When by this means the practitioner has determined that the blood is not derived from the urethra, but from the bladder or higher in the urinary tract, he will undoubtedly take the necessary steps to have his patient radiographed and cystoscoped and the ureters catheterized if necessary, thus completing the diagnosis. His problem will be solved in great measure if he will always remember that hæmaturia is a symptom, not a clinical entity; that there is no substitute for cystoscopy and ureteral catheterization; that anything else is mere guesswork and of no substantial value to his patient.

What has been said with reference to hæmaturia applies with equal and perhaps greater force to pyuria, except that the problem is somewhat more complex, and will be discussed more fully, starting on page 58. If the pus is derived from the bladder or upper urinary tract, the practitioner should at once realize that he is dealing with a condition in which the life of the patient is endangered, one that requires accurate diagnosis and the best surgical care that can be obtained.

My purpose in writing you is to bring this brazen instance of wholesale plagiarism to your attention and to ask your co-operation in giving it publicity in the hope that such publicity will serve as a warning to others who may feel inclined to resort to similar unethical practices for their own aggrandizement.

ABR. L. WOLBARST.

P. S. The lines enclosed in brackets on the photostatic sample pages, are not plagiarized.

The Truth About Medicine

In addition to the articles enumerated in our letter of May 29, 1925, the following have been accepted:

American Chemical Laboratories:
Rhus Tox. Antigen (Strickler).
Rhus Venenata Antigen (Strickler).

Britt, Loeffler & Weil:
Loeflund's Malt Extract With Calcium.
Loeflund's Malt Extract With Cod Liver Oil.

Lederle Antitoxin Laboratories:
Scarlet Fever Streptococcus Antitoxin (Unconcentrated).

Wm. S. Merrell Co.:
Pituitary Extract (Obstetrical)—Merrell.
Pituitary Extract (Surgical)—Merrell.

H. K. Mulford Co.:
Lamb's Quarters Pollen Extract—Mulford Treatment Sets.
Scarlatinal Antitoxin (Unconcentrated)—Mulford.

Parke, Davis & Co.:
Tuna Fish Protein Diagnostic—P. D. & Co.

Frederick Stearns & Co.:
Insulin—Stearns, 80 Units, 5 c.c.
Insulin—Stearns, 80 Units, 10 c.c.

Winthrop Chemical Co.:
Solarson.

NEW AND NON-OFFICIAL REMEDIES

Poison Ivy Extract—Lederle (In Almond Oil).—A solution in almond oil of a substance extracted from the fresh leaves of poison ivy (Rhus toxicodendron). The preparation is used to desensitize persons against poisoning with Rhus toxicodendron and to relieve the symptoms of the dermatitis produced by contact with the plant. It is injected intramuscularly. The preparation is supplied in syringes containing 1 c.c. Lederle Antitoxin Laboratories, New York.

Pollen Extracts—Mulford. The following pollen extracts—Mulford (New and Non-official Remedies, 1925, p. 285), are marketed in 5 c.c. vials containing 250 units per c.c.: Ash Tree Pollen Extract—Mulford; Bermuda Grass Pollen Extract—Mulford; Box Elder Pollen Extract—Mulford; Canary Grass Pollen Extract—Mulford; Cocklebur Pollen Extract—Mulford; Corn Pollen Extract—Mulford; Cottonwood Tree Pollen Extract—Mulford; Daisy Pollen Extract—Mulford; Dandelion Pollen Extract—Mulford; Dock Pollen Extract—Mulford; False Ragweed Pollen Extract—Mulford; Goldenrod Pollen Extract—Mulford; Johnson Grass Pollen Extract—Mulford; June Grass Pollen Extract—Mulford; Maple Pollen Extract—Mulford; Marsh Elder Pollen Extract—Mulford; Mountain Cedar Pollen Extract—Mulford; Mugwort Pollen Extract—Mulford; Oak Tree Pollen Extract—Mulford; Orchard Grass Pollen Extract—Mulford; Perennial Rye Grass Pollen Extract—Mulford; Plantain Pollen Extract—Mulford; Redroot Pigweed Pollen Extract—Mulford; Redtop Pollen Extract—Mulford; Russian Thistle Pollen Extract—Mulford; Rye Pollen Extract—Mulford; Sagebrush Pollen Extract—Mulford; Sugar Beet Pollen Extract—Mulford; Sunflower Pollen Extract—Mulford; Sweet Vernal Grass Pollen Extract—Mulford; Sweet Vernal Grass Pollen Extract—Mulford; Walnut Tree Pollen Extract—Mulford; Western Ragweed Pollen Extract—Mulford.

The following pollen extracts—Mulford, are marketed in 5 c.c. vials containing 250 units per c.c. and in treatment sets consisting of Series A: Doses 1 to 5, Series B: Doses 6 to 10; Series C: Doses 11 to 15, and Complete Series: Doses 1 to 15 inclusive; Lamb's Quarters Pollen Extract—Mulford and Wormwood Pollen Extract—Mulford. H. K. Mulford Co., Philadelphia. (Jour. A. M. A., June 6, 1925, p. 1734).

Pollens Dried—Mulford. The dried pollen of various species of plants. Pollens dried—Mulford, are intended for diagnosis only (Allergic Protein Preparations, New and Non-official Remedies, 1925, p. 278). A small amount of the dried pollen is rubbed into an abrasion of the skin to which has been applied a drop of physiological solution of sodium chloride or of tenth-normal sodium hydroxide solution. An urticarial wheal appearing within a half hour from the time of application indicates a sensitiveness to the particular pollen used. Pollens—dried—Mulford, are marketed in packages of one capillary tube containing a sterile needle and sufficient pollen for one test; in packages of six capillary tubes and in vials containing 0.05 Gm. of pollen.

The following have been accepted: Ash Tree Pollen Dried—Mulford; Bermuda Grass Pollen Dried—Mulford; Box Elder Pollen Dried—Mulford; Canary Grass Pollen Dried—Mulford; Careless Weed Pollen Dried—Mulford; Cocklebur Pollen Dried—Mulford; Corn Pollen Dried—Mulford; Cottonwood Pollen Dried—Mulford; Daisy Pollen Dried—Mulford; Dandelion Pollen Dried—Mulford; Dock Pollen Dried—Mulford; False Ragweed Pollen Dried—Mulford; Goldenrod Pollen Dried—Mulford; High Ragweed Pollen Dried—Mulford; Johnson Grass Pollen Dried—Mulford; June Grass Pollen Dried—Mulford; Lamb's Quarters Pollen Dried—Mulford; Low Ragweed Pollen Dried—Mulford; Maple Pollen Dried—Mulford; Marsh Elder Pollen Dried—Mulford; Mountain Cedar Pollen Dried—Mulford; Mugwort Pollen Dried—Mulford; Oak Tree Pollen Dried—Mulford; Orchard Grass Pollen Dried—Mulford; Perennial Rye Grass Pollen Dried—Mulford; Plantain Pollen Dried—Mulford; Redroot Pigweed Pollen Dried—Mulford; Redtop Pollen Dried—Mulford; Russian Thistle Pollen Dried—Mulford; Rye Pollen Dried—Mulford; Sagebrush Pollen Dried—Mulford; Shadscale Pollen Dried—Mulford; Sheep Sorrel Pollen Dried—Mulford; Slender Ragweed Pollen Dried—Mulford; Sugar Beet Pollen Dried—Mulford; Sunflower Pollen Dried—Mulford; Sweet Vernal Grass Pollen Dried—Mulford; Timothy Pollen Dried—Mulford; Velvet Grass Pollen Dried—Mulford; Walnut Tree Pollen Dried—Mulford; Western Ragweed Pollen Dried—Mulford; Wormwood Pollen Dried—Mulford. H. K. Mulford Co., Philadelphia.

Typhoid Vaccine—P. D. & Co. (New and Non-official Remedies, 1925, p. 363). This is also marketed in packages of thirty ampules, ten containing 500 million and twenty containing 1,000 million killed typhoid bacilli each. Parke, Davis & Co., Detroit.

Typhoid Paratyphoid Vaccine—P. D. & Co. (New and Non-official Remedies, 1925, p. 363). This is also marketed in packages of thirty ampules, ten containing 500 million killed typhoid bacilli, 375 million killed paratyphoid A and 375 million killed paratyphoid B bacilli, and twenty containing 1,000 million killed typhoid bacilli, 750 million killed paratyphoid A and 750 million killed paratyphoid B bacilli. Parke, Davis & Co., Detroit. (Jour. A. M. A., June 13, 1925, p. 1825).

Stovarsol.—Acetylaminohydroxyphenylarsonic Acid.—Stovarsol contains from 27.1 to 27.4 per cent.

XUM

of arsenic. Stovarsol has been reported to produce favorable effects in the treatment of amebic dysentery. It is claimed to yield satisfactory results both in the eradication of dysentariae cysts and encysted flagellates and for general amebic dysentery. Stovarsol is not proposed for the treatment of syphilis and its use in amebic infections is still in the experimental stage. Stovarsol is supplied in tablets containing 0.25 Gm. Powers-Weightman-Rosengarten Co., Philadelphia.

Insulin—Mulford. A brand of insulin (New and Non-official Remedies, 1925, p. 171). Insulin—Mulford is supplied in the following forms: Insulin—Mulford 10 units, 5 c.c.; Insulin—Mulford, 20 units, 5 c.c.; Insulin—Mulford, 40 units, 5 c.c. H. K. Mulford Co., Philadelphia (Jour. A M. A., June 20, 1925, p. 1917).

Rhus Tox. Antigen (Strickler).—A solution of a substance extracted from the fresh leaves of Rhus toxicodendron. Rhus Tox. Antigen (Strickler) is used to determine sensitiveness to Rhus toxicodendron, to desensitize persons against poisoning with Rhus toxicodendron, and to relieve the symptoms of the dermatitis produced through contact with the plant. Rhus Tox Antigen (Strickler) is supplied in packages of four 1 c.c. vials for use in prophylaxis and treatment and as Rhus Tox. Dermal Test in packages of a 1 c.c. vial (accompanied by a vial of Rhus Venenata Dermal Test), for use in determining sensitiveness. American Chemical Laboratories, Philadelphia.

Rhus Venenata Antigen (Strickler).—A solution of a substance extracted from the fresh leaves of Rhus venenata. Rhus Venenata Antigen (Strickler), is used to determine sensitiveness to Rhus venenata, to desensitize persons against poisoning with Rhus venenata, and to relieve the symptoms of the dermatitis produced through contact with the plant. Rhus venenata antigen (Strickler) is supplied in packages of four 1 c.c. vials for use in prophylaxis and treatment, and as Rhus venenata dermal test in packages of a 1 c.c. vial (accompanied by a vial of Rhus Tox. Dermal Test) for use in determining sensitiveness. American Chemical Laboratories, Philadelphia. (Jour. A. M. A., June 27, 1925, p. 2003).

PROPAGANDA FOR REFORM

Geroxide (Germanium Dioxid) Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that under the proprietary name "Geroxide," the Germanium Products Co., Trenton, N. J., markets a solution of germanium dioxid. The solution is prepared by dissolving germanium dioxid in water and neutralizing the weakly acid solution of the germanic acid with sodium hydroxide and making it isotinic by addition of sodium chloride. The Germanium Products Co. claims that germanium dioxid acts as a powerful stimulant to the red bone marrow and that its use is indicated in primary and secondary anemias. These claims are based on one group of workers. Independent work which bears on the therapeutic worth of germanium dioxid has not confirmed the claims which are advanced for the drug. In consideration of the lack of evidence for the therapeutic value of germanium dioxid, the Council voted not to accept Geroxide for New and Non-official Remedies on the ground that the claims made for it are unwarranted. This action was taken without passing on the question of the recognition of a proprietary name for a simple solution of the well known substance germanium dioxid. (Jour. A. M. A., June 6, 1925, p. 1856).

Prophylaxis of Endemic Goiter.—The prevention of simple goiter in endemic goiter regions by the administration of iodin tablets to school children and by the use of iodized salt is being extended year by year. Iodin tablets are given the school children of the following cities (and doubtless in other cities): Ithaca, North Tonawanna, Syracuse, Watertown and Cortland in New York State; Akron and Cleveland, Ohio, and Zurich, Switzerland. The health department of Michigan has cooperated with the state medical association, salt manufacturers and wholesale dealers, so that all table salts sold in Michigan contain small amounts of iodin. Many of the schools of West Virginia, Washington and Utah are applying this preventive measure under the state boards of health. Rochester, New York, iodizes the city water supply for one week twice yearly. The dangers and untoward effects from the use of iodin for the prevention of goiter are negligible; preventive work among school children should be carried out under medical supervision. The occasional appearance of "iodin hyperthyroidism" seems to be due to the use of large doses or to the continued use of iodin by a person over twenty with adenomatous goiter. A study of the literature does not reveal any report of a case due to the administration of iodin preparations in the schools according to the dosage recommended by Marine and Kimball. (Jour. A. M. A., June 13, 1925, p. 1858).

The Action of Quinine.—Quinine has long had some vogue as an antipyretic. It has been given a rather high rating among the fever allying drugs because of the belief that it acts not merely by depressing the heat regulating centers, but also by decreasing heat production. For the febrile patient treated with quinine, some advantage might accrue from prevention of the undue loss of protein that the heightened tissue breakdown is believed to bring about in fevers. A recent investigation, however, indicates conclusively that in nonmalarial febrile conditions it is not possible through quinine therapy to lessen materially the waste of energy or the destruction of body tissue. (Jour. A. M. A., June 27, 1925, p. 2006).

Witter Water.—This is a product put out by Witter Medical Springs, San Francisco. It is advertised as a remedy for "high blood pressure." The public is warned of the tragic consequences of this condition and given the usual line of testimonials telling how Mrs. A., with high blood pressure and one foot in the grave, took Witter Water and recovered. Among other constituents, Witter Water is claimed to contain nitrites and it is stated that this "undoubtedly accounts for its direct action in the reduction of blood pressure." Witter Water is also claimed to contain sufficient iodide to produce beneficial action. According to an analysis, the amount of sodium nitrite present in Witter Water is one and one-half grains per gallon and for thirty dollars the sufferer from high blood pressure would get approximately ten grains of sodium nitrite. According to the analysis there is seven one-hundredths of a grain of potassium iodide in each gallon of Witter Water. Thirty dollars worth of Witter Water contains less than one-half grain of potassium iodide. Yet the exploiters seem to think that the sodium nitrite content and the potassium iodide content are something to talk about. (Jour. A. M. A., June 27, 1925, p. 2021).

Sensitization to Pollen.—If a patient reacts to both giant ragweed (Ambrosia trifida) and common ragweed (Ambrosia artemesiafolia) the first conclusion

might be that he is sensitive to both pollens. However, it would be best to make retests with varying dilutions of the two pollens to find out whether the patient is much more sensitive to one than to the other. If the patient reacts equally to the two pollens, he should be treated with an extract representing the two pollens. Treatment with one pollen would not protect him against sensitiveness to the other pollen, since pollen sensitization is highly specific. (Jour. A. M. A., June 27, 1925, p. 2022).

Preventive Treatment for Rabies.—The Harris Pasteur Treatment for rabies can be given and kept on hand by the physician and is reliable. New and Non-official Remedies, 1925, lists the antirabic vaccine of a number of manufacturers which is sent out in packages of seven, fourteen and twenty-one doses. Recently the Council on Pharmacy and Chemistry has announced the acceptance of antirabic vaccine of this class marketed by the H. K. Mulford Co., the Cutter Laboratory and the Lederle Antitoxin Laboratories. (Jour. A. M. A., June 27, 1925, p. 2022).

Book Announcements

Approaching Motherhood. Questions and Answers of Maternity. By GEORGE L. BRODHEAD, M. D. Visiting Obstetrician, Bellevue and Allied Hospitals, Harlem Division, New York City. Paul B. Hoeber, Inc., New York. 1925. 12 mo. 193 pages. Price $1.50 net.

Simplified Nursing. By FLORENCE DAKIN, R. N., Inspector of Schools of Nursing, State of New Jersey. Philadelphia, London, Montreal. J. B. Lippincott Company. 1925. Octavo of 499 pages. Cloth.

Physical Diagnosis of Diseases of the Chest. By JOSEPH H. PRATT, A. M., M. D., and GEORGE E. BUSHNELL, Ph.D., M. D. Philadelphia and London. W. B. Saunders Company. 1925. Octavo of 522 pages with 166 illustrations. Cloth. Price $5.00 net.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery and the Various Specialties. By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, M. D., Philadelphia, and Collaborators. Volume II. Thirty-fifth Series. 1925. Philadelphia and London. J. B. Lippincott Company. 1925. 8vo of 311 pages. Cloth.

Proceedings of the International Conference on Health Problems in Tropical America. Held at Kingston, Jamaica, B. W. I., July 22 to August 1, 1924, by invitation of the Medical Department, United Fruit Company. Published by United Fruit Company, Boston, Massachusetts. 1924. 8vo of 1,010 pages. Illustrated. Cloth.

United Fruit Company, Medical Department. Thirteenth Annual Report. 1924. General Offices: Boston, Massachusetts. Paper. 247 pages.

Enzyme Intelligence and Whence and Whither. Illustrating that enzymes and ferments are the ultimate, indestructible and invisible units of life and are conscious and intelligent. That these units produce and maintain all living things we see. That our body is a Republic established by enzymes coming from the invisible world of life to which we return when we die. By NELS QUEVLI, author of "Cell Intelligence, the Cause of Evolution." Reg. Phar. LL. B. The Colwell Press, Inc., Minneapolis, Minn. 1925. 8vo., 578 pages, illustrated. Cloth. Price, $3.65 postpaid.

A Compend of Diseases of the Skin. By JAY FRANK SCHAMBERG, M. D., Professor of Dermatology and Syphilology, Graduate School of Medicine, University of Pennsylvania; Director of the Research Institute of Cutaneous Medicine, Philadelphia, etc. Seventh Edition, Revised and Enlarged. 12mo. of 316 pages with 119 illustrations. Philadelphia. P. Blakiston's Son and Company, 1012 Walnut Street. 1925. Cloth. Price $2.00.

A Compend of Obstetrics. Especially Adapted to the use of Medical Students and Physicians. Revised and edited by CLIFFORD B. LULL, M. D., Instructor of Obstetrics, Jefferson Medical College, Philadelphia; Assistant Obstetrician to the Maternity Department, Jefferson Medical College Hospital, etc. Tenth Edition. 12 mo. 283 pages with 84 illustrations. Philadelphia. P. Blakiston's Son and Company, 1012 Walnut Street. 1925. Cloth. Price $2.00.

Operating Room Procedure. For Nurses and Internes. By HENRY C. FALK, M. D., Assistant Attending Surgeon to the French Hospital; Instructor in Surgery at New York University and Bellevue Medical College. With a Foreword by EUGENE H. POOL, M. D., New York. 12mo. 385 pages with 275 illustrations. G. P. Putnam's Sons, New York and London. The Knickerbocker Press. 1925. Cloth. Price $2.50.

Three Merry Widows. A New View of, and Remedy for, Ordinary Insanity; and a New System for Asylum and Prison Management. Dedicated to the Endocrinologists and to the Roentgenologists of America, for Advice and Assistance which Enabled Completion of the Matter. Copyrighted 1925. By L. R. Whiting, 913 East Ninth Street, Austin, Texas. 12mo. 24 pages. Paper.

KINDNESS

One never knows
How far a word of kindness goes;
One never sees
How far the smile of friendship flees.
Down through the years
The deed forgotten reappears.

One kindly word
The soul of many here has stirred.
Man goes his way
And tells with every passing day
Until life's end:
"Once unto me he played the friend."

We can not say
What lips are praising us today.
We can not tell
Whose prayers ask God to guard us well.
But kindness lives
Beyond the memory of him who gives.

—Edgar A. Guest.

XUM

Virginia Medical Monthly

FOUNDED BY LANDON B. EDWARDS, M. D., APRIL, 1874.
OWNED BY THE MEDICAL SOCIETY OF VIRGINIA.
PUBLISHED BY THE PUBLISHING COMMITTEE.

A. G. BROWN, Jr., M. D., Chairman, Richmond, Va.
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All correspondence regarding editorial matters, articles, advertisements, subscription rates, etc., should be addressed to the Journal.

All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription Price: $2.00 per annum in advance.
Single Copies 20c.

Vol. 52 AUGUST, 1925. No. 5

Editorial

Dear Doctor:

There appears to be more typhoid than usual. We would appreciate it if you would report cases promptly and let us know if you can ascribe any probable cause, such as visits (two weeks before becoming sick) to particular swimming pools, beaches, ponds, or places where insanitary conditions may exist.

Please urge typhoid vaccination generally, and insist on it in homes or communities where typhoid exists. Always urge the importance of the safe disposal of human excreta so that flies will not have access to it and so that it will not endanger drinking water; also urge the importance of protecting all drinking water.

ENNION G. WILLIAMS,
State Health Commissioner.

Plagiarism.

The act "of appropriating writings or ideas of another and passing them off as one's own: the stealing of the writings of another and publishing them as one's own composition," according to Hunter-Morris encyclopedic dictionary, is a definition of plagiarism. And no evil in the history of literary compositions can exceed plagiarism in the quality of its moral turpitude. The exceeding fault of appropriating another's writings and publishing them as one's own has more than once stigmatized and brought a killing blight to the name of writers of more or less note in the past. In the profession of literary men and in the history of literature the shame that has been attached to such disgraceful practice has made its present-day occurrence infrequent. The tone of this ethical character of literary men of today is high and praiseworthy.

However, in the vast volume of medical writings, occasioned by the enormous production of papers, addresses, case-reports, research publications, books, et cetera, coming "hot off the press" of our time, one can not help but notice a certain laxity that has crept in on this score. The reproduction and duplication of ideas and writings is necessary often times, in the demands of modern medical progress, when medical societies, meetings and medical monthly and weekly publications are so numerous. It is but right, therefore, to utter a note of caution and to emphasize the ethical necessity for careful notation in manuscripts of the origin of the material, either in ideas or words. Writers should tighten up and correct this lax or thoughtless practice, if medical publications of today are not to suffer a lamentable decadence in high moral standards.

Unfortunately, we must call attention to an egregious and gross instance of plagiarism. Besides, it is our unpleasant duty to express our emphatic disapproval and condemnation of it. We refer to the use made of Dr. Wolbarst's article, which is brought to the attention of our readers in an open letter from Dr. Wolbarst, published in this issue of the MONTHLY, on page 319. The flagrant reproduction, without credit, of Dr. Wolbarst's article, is convincing. So gross an act of plagiarism offends ethical sense and violates the moral standards of medical authors and publications. And, in expressing this public disapproval, the VIRGINIA MEDICAL MONTHLY is only giving voice, it feels, to the condemnation which our readers, members of the Medical Society of Virginia, will experience as they read (with regret) Dr. Wolbarst's letter and the photostatic reproduction in parallel columns of his original paper and the plagiarized production.

Bile and Bile Tract Disease.

Bile is a digestive fluid only in part. The bile acids, alone, seem to have important functions in digestive processes. While the other constituents of the bile help, they seem to be more waste products: bile pigments from destroyed hemoglobin, cholesterol from broken-down fat, and lecithin from expended brain and nerve tissue. Do these systems of the blood, fat, and nerve tissue of the body find in the bile the readiest medium of excretion

of their waste? The bile acids, however, serve a definite digestive function; in addition to serving as a "menstruum for dissolving the cholesterin" in the bile, they assist in splitting and absorbing the fats in the intestinal tract and, besides, they serve as activating hormones to the flow and quality of the digestive secretion from the pancreas. One must not overlook in thinking of the bile, however, the importance of it as an excretion, as well as a digestive product, in the upper reaches of the intestinal tract, pouring in 500 to 800 c.c. daily. So, one may well consider briefly some phases of bile physiology before one comments upon the dysfunction of bile and the diseases of the bile tract.

It seems evident from experimental work of physiologists that the bile pigment arises outside of the liver by disintegration of hemoglobin and is excreted by the liver cells as a part of bile; that bile acids are secreted by the liver cells; that cholesterin is not formed in the liver, but is excreted through the liver from the blood "which collects it from various tissues of the body" (Howell); that lecithin, likewise, occurring "in largest quantity in the white matter of the nervous system," derived from the liver or from the body, is excreted in the bile. In this connection one may note the sum of bile constituents as expressed by Howell, in the following terms:

Solids	2.520	Fatty acids from soap	0.0630
Water	97.480	Cholesterin	0.0630
Mucin and pigment	0.529	Lecithin	0.0220
Bile salts	0.931	Fat	0.0220
Taurocholate	0.3034	Soluble salts	0.8070
Glycocholate	0.62761	Insoluble salts	0.250

The out-pouring of bile is continuous, but the variation in the amounts are influenced by the constituents of the blood flowing through the liver. The portal blood, containing stimulating food products from the intestines, the bile pigments reabsorbed from the intestines, and the gastric chyme, all stimulate the formation of bile. This product, flowing from liver lobule through the bile radicals courses on to the common bile duct and to the gall-bladder. The bile enters the doudenum "periodically during the time of digestion;" being held back by the sphincter, is diverted to the gall-bladder where condensation and concentration of it occurs, storing it for future use. The passage of food, gastric chyme, into doudenum, particularly the products of protein and fat gastric digestion, appears to excite, through "probably reflex action, a contraction of the gall-bladder and an inhibition of the sphincter, relaxing the opening into the intestines."

It is in the region of the common duct, and gall-bladder connections, that pathology most often occurs. Digestive disturbances may easily occur as symptoms. Gall-stone formation, after months of perversion of bile and after a long period of inflammation of the walls of the bile ducts and gall-bladder, may be expected.

Bile Ducts

The bile ducts vary* in arrangement and relationship: cystic duct may not be joined to the common duct until just before it enters the duodenum; the cystic and common may not unite; the common duct may open into doudenum with or without junction with the duct of Wirsung. The variations make for slight difference in assortments of symptoms. Catarrhal jaundice is a common symptom of bile obstruction. This symptom may be of serious import, but, usually, may be taken as an indication of duodenal inflammation, bringing about swelling of ampulla of Vater and inflammation of the outlet of the common duct, setting up an obstruction to the flow of bile. Thus, retention of bile brings about jaundice. To repeat, mucous membrane of duodenum, ampulla of Vater, or common duct, may become irritated or infected, and may produce an obstructive swelling at this bile exit, and in this way produce biliousness or jaundice, or both. The important consideration in this matter is to properly evaluate the symptoms of jaundice; to make a proper interpretation of its underlying causes and associations.

Infective cholangitis or infection of the bile ducts follows more serious inflammatory changes. It may be suppurative. Suppurative cholangitis follows a malignant infection such as from bacilli streptococci, staphylococci, pneumococci, bacilli coli and bacilli typhosus. In such a state of infection the ducts are dilated, liver enlarged and bile is purulent. The patient shows hectic symptoms, jaundice present (or absent); extreme prostration and gastric intestinal dysfunction. A milder but more prolonged bile tract disorder may be noted under the generalization of chronic infective cholangitis, which may be associated with or without gall-stones. This condition involves

*Read Oxford Medicine on Bile Tract Disease.

XUM

pathologic consideration of moment and we can only speak of it thus briefly.

Gall-Bladder

The gall-bladder is a common site of disease and is intimately connected with bile duct inflammation and infection, as well as with the nature of the bile itself. Routes of infection of gall-bladder and etiology of gall-bladder disease are still under discussion. It is easy to conceive, however, that the usual channels of infection operate here as in other parts of the body. The microorganism may enter the mucous membrane through blood stream, lymphatics, through bile, or from ducts. Cholecystitis may be secondary to infection for distance primarily; pneumonia, influenza, septicemia, tonsillitis, or other focal infections, appendicitis, pyleitis, prostatitis, urethritis, etc. The gall-bladder may be inflamed, but not so acutely as to produce obtrusive symptoms, but yet so as to affect very seriously the digestive function, to produce discomfort in epigastrium, to set up symptoms usually spoken of as "biliousness." Under such a symptom-complex the quality of the bile and the quantity reaching the duodenum to enter into the digestion processes there, is materially altered and diminished. Under such perversions of bile function, patients suffer, sometimes indefinitely, but no less actually, symptoms of bile poisoning. This bile poisoning displays itself in gastric and intestinal symptoms, in urinary symptoms, in skin symptoms and in nervous and mental symptoms.

Gall-Stones

Cholelithiasis may occur from mere precipitation of cholesterin when constantly present in an excessive amount in gall-bladder bile. This may cause an aseptic cholesterin gall-stone. Contamination by microorganisms of bile, bile ducts, or gall-bladder, under conditions of "hypercholesterinemia or high cholesterin content of bile," or even under normal bile, makes for bile stone formation. The contributory factors to the bile stone stage are quite obvious; long continued dietary abuses are the most common. Excessive carbohydrate and fat diets tend to gall-stone formation. Catarrhal congestion of duodenal tract tends to stagnate the fluid movement of the bile and obstruct its prompt out-flow, and serves to favor the precipitation of cholesterin and bile pigment, which forms the initial step in gall-stone production. Infection of the bile, the ducts, or the gall-bladder by microorganisms arriving from primary foci, proximate or remote foci, only make the process more certain and inevitable. Solitary pure cholesterin stones are rare, for infection and inflammation usually, in time, add to the formation bilirubin calcium: these form about 60 per cent of all hepatic calculi. There are certain variations in chemical formation, as one may easily conceive. The form and number of stones are known to vary greatly. The important observation in this connection is that clinicians and surgeons must consider patients of this type as being in the late stage of biliary disease. Really the symptoms of biliary colic are the symptoms of late biliary disease. This phase of biliary pathology is preceded by a train of symptoms, or conditions, which if treated, may prevent such gross and such late and ugly symptoms. For this, however, physicians are not to be held reprehensible, because all too frequently patients with clear-cut and definite symptoms of "biliousness" and gastric disturbances, accompanying chronic foci of infection, go along for months and years, abusing all reasonable laws of diet and physical well-being until, eventually, unable to avoid appealing for medical aid, they come under observation in the late stage of biliary disease in the form of an hepatic colic, an attack of jaundice or suppurative cholangitis, cholecystitis, or chronic digestive disturbances.

In conclusion, one may read Judd's[1] well-considered article in thinking on the questions of surgical procedures in jaundiced patients. Attention is directed to the work of McNee on the mechanism of jaundice, describing possible avenues through which jaundice may occur. Judd adopts McNee's classification of jaundice, which divides jaundice into three clinical groups: (1) obstructive hepatic jaundice, (2) toxic and infectious hepatic jaundice, and (3) hemolytic jaundice. Surgery can, according to Judd, accomplish "a great deal in cases of obstructive jaundice by relieving the obstruction." Surgery can also help hemolytic jaundice by removing the spleen. But in the case of infectious hepatic jaundice, it is "difficult to ascertain how much can be accomplished by treating them surgically."

Pain plays an important and a significant part in the history of jaundice, according to

1. Judd, Jour. A. M. A., Vol. 85, No. 2, page 88.

our author, in that its presence indicates the probability of stone and its absence points more toward malignancy. As operation for removal of obstruction is imperative, certain precautionary measures are advocated in the nature of pre-operative preparation. These may be brought out chiefly in this manner:

(a) If jaundice appears to be receding, operation may wisely be postponed as long as patient improves.

(b) The long standing case of jaundice is the greater risk and should be handled with greater caution.

(c) In cases where jaundice has turned green or blackish, with or without petechial hemorraghic areas, operations should not be performed. This rather indicates malignant lesion beyond hope.

(d) "No jaundiced patient should be operated on until a very careful investigation has been made":

1. Coagulation time of blood and calcium content.

2. Estimation of serum bilirubin.

3. Use of intravenous administration of calcium in three-day series in effort to bring up coagulation time and reduce bilirubin.

Judd cites experience of 142 cases operated upon in Mayo Clinic with disease of common duct; 104 had some degree of jaundice at the time of operation; eleven of the 142 died, four of which showed hemorrhage.

The author concludes this interesting article with the following summary:

"A practical application is made of the work of McNee, van den Bergh, Aschoff and Mann to the surgical treatment of jaundiced patients. The most valuable aid in the handling of jaundiced patients is the van den Bergh test for the quantity and quality of bile in the serum.

"Much has been accomplished in the pre-operative treatment of jaundiced patients, which means more than just the intravenous administration of calcium. I believe that in deeply jaundiced patients the common ducts should usually be drained with a tube, and the gall-bladder should be drained if neceessary but not removed.

"Hepaticoduodenostomy is the procedure of choice in cases of post-operative stricture. Cholecystogastrostomy offers considerable relief in certain types of inoperable malignant diseases, and also seems helpful in cases of hepatic infectious jaundice.

"Multiple needle punctures in cases in which the liver is badly damaged allow a certain amount of blood and fluid to drain out, and may tend to restore the function of the liver."

News Notes

Time Drawing Near For Richmond Meeting.

Shortly after summer vacations stop, the Medical Society of Virginia will hold its annual meeting in Richmond. The dates are October 13-16, and a large attendance is expected. Cards have been mailed to all members, stating that "Puerperal Infection" is the subject for general discussion, and at the same time asking for titles of papers. On this card was explained the resolution relative to limiting the number of papers to be presented, so that the Society might have only one section instead of two, as for the past few years. The resolution is as follows:

"1. No title shall be accepted for the program prior to two months before date of the annual meeting. As provided in the By-Laws, an announcement concerning the annual meeting and request for titles of papers shall be mailed by the Secretary-Treasurer to all members of the Society.

"2. On and after the day which would be two months prior to the first day of the annual meeting, titles will be received until fifty are in hand. In the fifty titles referred to, provision shall be made for the papers of the invited guests and papers on the subject of general discussion.

"3. After the fifty titles are received, the Program Committee shall arrange and classify them according to related subjects."

This will not greatly reduce the number of papers to be presented in comparison with programs of previous years, but we would suggest that no member should send a title for the program unless he is reasonably sure of being able to attend, as he might thus keep off the program some member who can be on hand.

Dr. T. D. Jones, chairman of the Richmond committee in charge of arrangements, has appointed the following chairmen to look after details:

Reception and Automobiles—Dr. Fred M. Hodges.

Badges, Printing and Publicity — Dr. Thomas W. Murrell.

Golf—Dr. E. H. Terrell.

Finance—Dr. Carrington Williams.

Entertainment—Dr. Clifton M. Miller.

Scientific Exhibits—Dr. J. Shelton Horsley.

Commercial Exhibits, Hotels and Meeting Halls—Dr. James K. Hall.

Ladies—Mrs. Fred M. Hodges.

XUM

Dr. Hunter H. McGuire, Winchester, is president. His invited guests, Drs. George E. de Schweinitz and Alfred Stengel, of Philadelphia, and Dr. David S. Hillis, of Chicago, will be a big attraction. Make your plans now to be on hand.

The Southwestern Virginia Medical Society

Will hold its regular meeting at Mountain Lake, Va., August 27 and 28, Dr. F. H. Smith, Abingdon, presiding. Dr. Estill Caudill, Narrows, Va., is chairman of the Committee on Arrangements and he and the secretary, Dr. Elbyrne Gill, Roanoke, will be glad to furnish information. A subscription banquet will be held on the first evening. A symposium on "Pelvic Diseases" will be held and a number of other interesting papers will be presented by visitors and members.

Midsummer Vacationists.

Dr. and Mrs. O. B. Darden have returned to their home at Westbrook Sanatorium, Richmond, after a visit to Statesville, N. C.

Dr. and Mrs. R. F. Thornhill, Pulaski, spent sometime in July visiting relatives at Orange, Va., the doctor's former home.

Dr. Clarence Porter Jones and son, of Newport News, Va., spent the first two weeks in July on a fishing trip at Nimrod Hall, Va.

Dr. and Mrs. Stuart Michaux, Richmond, on a recent motor trip visited Lexington and Natural Bridge, Va.

Dr. and Mrs. J. V. Jordan, of Covington, left about the middle of July on a motor trip for a visit to relatives in Ottawa, Canada, and in Pennsylvania. They expected to be away for several weeks.

Dr. O. C. Page, of Brodnax, was a visitor in Richmond, the middle of July.

Dr. B. L. Hillsman recently returned to his home in Richmond after a fishing trip on the Rappahannock River.

Dr. J. T. Walker has returned to Gordonsville, Va., after spending sometime at Slab Fork, W. Va., with Dr. F. L. Banks.

Dr. L. H. Lewis, of Lawrenceville, has returned home after a two weeks' visit with his family at Goshen and Harrisonburg, Va.

Dr. F. H. Lee has returned to his home in Richmond after visiting a number of points of interest in the West.

Dr. Phil H. Neal, of the class of '23, Medical College of Virginia, after two years' internship at Gouverneur Hospital, New York City, was a visitor in Richmond last month.

Dr. Rachel Weems, a member of the class of '24, Medical College of Virginia, who spent the past year as an interne at Memorial Hospital, Worcester, Mass., is spending the summer months with her parents in Ashland, Va.

Dr. and Mrs. Howard R. Masters, Richmond, have been spending a vacation in Asheville, N. C.

Dr. and Mrs. Fred Hodges, Richmond, left the last of July for a motor trip to Canada and some places of interest in the northern states. They will be away several weeks.

Dr. and Mrs. E. H. Luck, Roanoke, have been visiting at Sweet Springs, W. Va.

Dr. J. A. Riffe, Covington, was another recent guest at these Springs.

Dr. and Mrs. E. H. Terrell and daughters, Richmond, left on a motor trip about the first of August and expected to spend several weeks visiting various places of interest in Canada and in the northern states.

Dr. R. W. Garnett and children returned to their home in Danville, about the middle of July, after a visit to Virginia Beach.

Dr. and Mrs. Murat Willis and children, Richmond, are spending the month of August at Rockbridge Baths, Va.

Dr. and Mrs. J. Morrison Hutcheson and children, Richmond, are also spending August with Dr. Hutcheson's mother at Rockbridge Baths, Va.

Dr. S. E. Hughes, Danville, has been spending several weeks in Asheville, N. C.

Dr. and Mrs. Elbert B. Talbot returned to their home in Richmond, about the middle of July, after a visit through the Valley of Virginia.

Dr. William R. Weisiger, Richmond, is home again, after a vacation spent in New York City and New Haven, Conn.

Dr. and Mrs. James M. Parrott and son, of Kinston, N. C., are on a western trip. They will spend the greater portion of their vacation in Wyoming.

Dr. and Mrs. Alfred S. Grussner have returned to their home at Bassetts, after a visit to Richmond and New York.

Dr. and Mrs. A. G Brown, Jr., Richmond, are home again after a visit to friends near Charlottesville, Va.

Dr. R. C. Fravel, Richmond, after a short visit to Canadaigua Lake, N. Y., is again visiting relatives in Woodstock, Va.

Dr. P. E. Tucker, of Buckingham, Va., has

been a recent vistior in Richmond, having come here to be with his wife who underwent an operation in a local hospital.

Dr. and Mrs. H. S. MacLean returned to their home in Richmond, the latter part of July, after a visit to Atlantic City, N. J.

Dr. L. O. Vaughan, Waverly, was a recent visitor in Richmond.

Dr. and Mrs. J. K. Richardson, Richmond, with a party of friends, recently enjoyed a motor trip through the Valley of Virginia.

Dr. W. O. Bailey, Leesburg, is home again after a visit to Warrenton, Va.

Dr. and Mrs. J. C. Flippin, University, Va., are spending several weeks at Camp Alleghany, Va.

Dr. and Mrs. M. R. Faville, Roanoke, were recent visitors at Monterey, Va.

Dr. and Mrs. H. S. Hedges have returned to their home in Charlottesville, after a vacation spent on Chesapeake Bay.

Dr. W. S. Beazley, Jr., who for the past year has been an interne at the New Fork Foundling Hospital, New York City, is now with his parents in Richmond.

Dr. and Mrs. T. E. Patteson and family, of Ransons, have been enjoying a visit through the Valley of Virginia with a party of friends.

Dr. and Mrs. Thomas F. Gill, Richmond, have returned from a two weeks' visit at Colonial Beach, Va.

Dr. George G. Hankins, of Philadelphia, Pa., recently visited friends at his old home in Williamsburg, Va.

Dr. and Mrs. J. F. Geisinger, Richmond, are on a motor trip with a party of friends to Canada and points of interest in the northern states.

Dr. and Mrs. W. G. Trow, Warrenton, went early in August with a party of friends for a camping trip at Happy Creek on the Shenandoah River.

Dr. A. L. Stratford, II, has returned to his home in Richmond, after a vacation spent in visiting friends in Canada, Pennsylvania, Maryland and West Virginia.

Dr. and Mrs. L. T. Royster, University, Va., are spending sometime at Virginia Beach.

Dr. and Mrs. Frank P. Smart, Norfolk, Va., have been visiting friends at Crozet, Va.

Dr. and Mrs. Arthur S. Brinkley have returned to their home in Richmond, after a visit at Virginia Beach.

Dr. and Mrs. J. Weldon Smith and family, of Farmville, were recent visitors at Virginia Beach.

Dr. and Mrs. Kenneth Bradford have returned to Staunton, after an automobile tour in Canada.

Dr. and Mrs. John W. Carroll, of Lynchburg, have been spending sometime at Virginia Beach.

Dr. and Mrs. W. E. Anderson, Farmville, are spending the late summer at their country home in Dinwiddie County, Va.

Dr. and Mrs. Ramon D. Garcin, Richmond, have been spending the summer at Goshen and Lexington, Va., where Dr. Garcin has greatly improved after his illness of last winter.

Dr. S. T. A. Kent, of Ingram, recently visited his daughter in Pulaski, Va.

Dr. Waller Jameson, Roanoke, was a midsummer guest at Crockett Springs, Va.

Attend Medical Reserve Officers' Training Camp.

The following doctors from Virginia, District of Columbia, North Carolina and West Virginia spent two weeks in July attending the Medical Reserve Officers' Training Camp at Carlisle, Pennsylvania:

Virginia—Major William A. Brumfield, Blacksburg; Lt. Col. Giles B. Cook: Front Royal; Major Charles M. Edwards, Richmond; Capt. George A. L. Kolmer, Salem; Major William J. Olds, Front Royal; and 1st Lt. George C. Tyler, Chester.

District of Columbia—1st Lt. William M. Ballinger; Major J. Wesley Bovee; Major Coursen B. Conklin; Lt. Col. James C. Cumming; Capt. Everett M. Ellison; Col. Thos. M. Foley; Major Charles I. Griffith; 1st Lt. Daniel S. Hatfield; Major Joseph P. Madigan; 1st Lt. John A. Reed; Col. Edward G. Seibert; Major Joseph D. Stout; and Major Daniel Stuart, all of Washington, D. C.

North Carolina—Capt. George G. Dixon, Ayden; Major Julius A. Dosher, Southport; Capt. Lewis J. Dupree, Kinston; Major Philip S. Easley, Statesville; Major John G. Hoggard, Wilmington; Col. John W. Long, Greensboro; Col. John W. MacConnell, Davidson; Major Jay H. McClellan, Asheville; Lt. Col. Coite L. Sherrill, Statesville; Major Victor R. Small, Clinton; Capt. William E. Woods, Elizabeth City.

West Virginia—Col. Jonathan E. Burns. Charleston; Lt. Col. Lurty M. Harris, Wheel-

XUM

ing; and Major Hugh G. Nicholson, Charleston.

Dr. Graves with St. Elizabeth's Hospital, Pearisburg.

Drs. W. C. and E. L. Caudill announce the addition to the staff of St. Elizabeth's Hospital, Pearisburg, Va., of Dr. K. D. Graves, formerly associated with Lewis-Gale Hospital, Roanoke, Va. Dr. Graves will be director of the department of internal medicine and clinical pathology.

Sir Aukland Geddes Assumes Leadership of Social Hygiene Council.

Sir Aukland Geddes, former British ambassador to the United States, has accepted the presidency of the British Social Hygiene Council. As Sir Aukland Geddes is already president of the Society for the Prevention of Venereal Disease, it is anticipated that, if the present efforts are continued and extended, venereal diseases in England will be reduced to a minimum.

Dr. George H. Thomas,

After a service of a year at the U. S. Veterans' Bureau, Richmond, Va., has returned to Staunton, Va., where he will resume private practice.

Dr. C. P. Cake,

Of this year's class, University of Virginia, School of Medicine, is now on duty at Blue Ridge Sanatorium, Charlottesville, Va.

Dr. Charles P. Howze,

Formerly associate urologist to University of Virginia Hospital and instructor in the Medical School, has moved to Danville, Va., and opened offices at 303-305 Masonic Temple. His practice will be limited to urology.

Dr. Charles C. Hedges,

Grafton, W. Va., of the class of '22, University of Virginia, has been appointed health officer of Ohio County, West Virginia.

Dr. Ernest Mosby,

Waynesboro, Va., is one of the charter members and directors of the Kiwanis Club of that city.

Married.

Dr. Perry H. Wiseman, of Henrietta, N. C., and Miss Grace Florence Furrh, for the past few years superintendent of Hygeia Hospial, Richmond, July 7. Dr. Wiseman is a member of this year's class, Medical College of Virginia. They will make their home at Henrietta, N. C.

Dr. Clack Dickinson Hopkins, Richmond, and Miss Mildred Carter Lee, of Powhatan County, Va., August 1. They left at once for Miami, Fla.

In Charge of Health of Huntington, W. Va.

Dr. Joseph Rader has been appointed city health officer of Huntington, W. Va., and Drs. Benj. L. Hume, Charles L. Hopkins, Joseph C. Ford, and Simpson A. Smith have been appointed city physicians. Drs. Hume and Ford are alumni of the Medical College of Virginia.

American Board of Otolaryngology.

An examination was held by the American Board of Otolaryngology on May 26, 1925, at the Medico-Chirurgical Hospital, Philadelphia, with the following result:

Passed	137
Failed	20
Total Examined	157

The next examination will be held at the University of Illinois School of Medicine on October 19, 1925. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Mo.

Dr. W. H. C. White,

Recently of University, Va., is now at Ancker Hospital, St. Paul, Minnesota.

Dr. Fred M. Horsley

Who has been at Berryville, Va., for the past several months, is now at his old home at Lovingston, Va.

South Carolina Has Effective System of Disease Reporting.

Dr. James a Hayne, State Health Officer of South Carolina and Collaborating Epidemiologist of the U. S. Public Health Service, has instituted a new and decidedly more effective system of disease reporting by physicians. Each week a card is mailed to physicians for the report of the number of cases of diphtheria, gonorrhea, syphilis, malaria, smallpox, tuberculosis, and certain other diseases. The greater effectiveness of this system of reporting is shown by the fact that in the first month of its operation 734 cases of syphilis were reported as against an average of 245 cases for each of the preceding ten months, or three times as many cases as were reported formerly. There is a still higher rate of increase in the number of reported cases of gonorrhea. Over seven times as many cases of this disease were re-

ported under the new system as were reported formerly.

Dr. Charles B. Crute,

Farmville, Va., has been named commander of the re-organized American Legion Post at that place.

Dr. L. O. Crumpler,

Danville, Va., the latter part of July won the speer cup offered for the open tournament of the Danville Golf Club.

The Frederick Kimball Stearns Memorial Fellowship in Medicine

Has been founded by Frederick Stearns & Company of Detroit, at the University of Michigan, in honor of the late Frederick Kimball Stearns.

Mr. Stearns was a life-long patron of the Arts and Sciences, and had shown a special interest in the progress of the University of Michigan. The Stearns' Botanical Gardens, the Stearns' Fellowship in Pharmacy and the Stearns' Collection of Musical Instruments, the most complete collection of its kind in the world, were evidences of his interest and generosity.

While the medical fellowship is to be used at the direction of the University medical authorities, the work during the coming year will be devoted to researches on Insulin and Insulin therapy. The study of this problem has been of the greatest interest also in the Scientific Laboratories of Frederick Stearns & Company in the course of the development of their product, "Insulin-Stearns," which has been so extensively used in the treatment of diabetes.

Maine Legislates Against Spread of Venereal Diseases.

As a measure for the protection of the community from venereal infection the Maine Legislature has passed an amendment whereby superintendents of State, county, and municipal charitable or correctional institutions are required to report to the State Department of Public Health any inmate about to be released and who is afflicted with a venereal disease in an infectious form. The report is to be made not later than fourteen days before the estimated date of release, so that the State Department of Public Health may "take necessary measures to protect others from such infection."

Re-appointed on State Board of Health of North Carolina.

Dr. Richard H. Lewis, of Raleigh, has been re-appointed a member of the State Board of Health of North Carolina for a period of six years. Dr. Lewis has been a member of the Board continuously since 1884.

Dr. Lee S. Liggan,

After a two years' internship at Memorial Hospital, Richmond, has located at Callao, Va., for the practice of his profession. Dr. Liggan is a member of the class of '23, Medical College of Virginia.

Dr. J. Gordon Boisseau,

Richmond, was elected a member of the executive committee of the Church Hill post of the American Legion, at its meeting the latter part of July.

Re-appointed on School Board.

At a meeting of the school electoral board of Clarke County, last month, Dr. Chas O. Dearmont, White Post, was re-elected president, and Dr. J. E. Harris, Berryville, was re-elected a member of the board.

Re-appointed Members of South Carolina State Board of Medical Examiners.

Drs. Joseph T. Taylor, of Adams Run, and Frank M. Lander, Williamston, have been re-appointed members of the State Board of Medical Examiners of South Carolina.

Officers in Winchester Post, American Legion.

Drs. P. W. Boyd and B. B. Dutton, of Winchester, have been elected officers in the Robert I. Conrad Post, American Legion, of that place.

Drs. Edmunds and Tipton,

Danville, Va., announce the subdivision of their practice as follows: Dr. T. W. Edmunds, diseases of the eye, and Dr. J. W. Tipton, diseases of ear, nose and throat. They will maintain their partnership and offices in the Arcade Building, that city.

Hospital Elects Officers.

The staff of the Virginia Baptist Hospital, Lynchburg, Va., has elected Dr. F. O. Plunkett chief; Dr. Hunter B. Spencer vice-president; and Dr. F. Musgrave Howell secretary.

Abbott Laboratories to Have New Plant.

The new plant of the Abbott Laboratories, now nearly ready, will be, when occupied, the finest complete pharmaceutical and research plant in the world. Here the newest synthetic,

XUM

medicinal chemicals are made in large quantities by improved processes, insuring purity and accuracy. Here also are extracted from the crude drugs the medicinal principles used largely throughout the pharmaceutical industry as well as by the medical profession.

Larger quarters will be provided for the extensive research work now being carried on by a large staff of chemists and new buildings are being provided for the manufacture of the well-known Abbott pharmaceutical specialties.

The administrative office of The Abbott Laboratories, located for many years in Ravenswood, will be moved about October 1st of this year to the new plant. The postoffice address will be Waukegan, Ill., twenty-five miles north of Chicago on the C. & N. W. R. R. About twenty-four acres of ground are owned by the Abbott Company to provide for the future expansion of their business.

Dallas Will Entertain the Southern Medical Association in November.

A warm invitation is being extended to the doctors of the South to attend the annual meeting of the Southern Medical Association this fall, and preparations are being made to entertain between four and five thousand.

Dallas has all the chief requirements for a successful convention city; ample hotels and auditoriums, easy accessibility, facilities for entertainment and diversion, coupled with whole-hearted hospitality on the part of the citizenship. It is not only a medical center of importance, but a city of interest and opportunity.

Ten trunk line steam railroads serve Dallas, with 100 passenger trains daily in and out of $6,500,000 Union Terminal Station; 258 interurban trains leave the $1,000,000 electric interurban station daily. Dallas is sixteen hours by rail from Kansas City, eighteen hours from St. Louis, twenty-seven hours from Chicago or Cincinnati, and forty-three hours to New York.

For those who wish to use the automobile in attending the S. M. A. convention, Dallas is located on five transcontinental highways, Bankhead, Meridian, King of Trails, Dallas-Canadian-Denver, and the Dixie Overland. These highway organizations assure the tourist of well kept roads. In Dallas County alone are 1,000 miles of surfaced highways, and a tourist camp and centers of highway information are available also.

Dallas has a number of strong clubs, splendidly housed, such as the Dallas Athletic Club, University Club, City Club, a number of fine golf clubs, and all the leading national service organizations, such as Rotary, Lions, Kiwanis are represented here—all are most hospitable in the entertainment of visitors.

Restaurants, either connected with hotels or independent, are numerous and of a generally high standard. Dallas has some of the highest priced chefs in the nation. You can get meals with a Western flavor, Mexican dishes, Chinese dishes, or old-fashioned Southern cooking. All the year truck gardens and farms are producing in some part of Texas, and this, coupled with proximity to packing houses, poultry farms and orchards, tends to keep food prices reasonable.

Dallas has thirty-seven theatres, with a combined seating capacity of 28,000. These include summer and winter stock companies, many good road shows during the season, high-class vaudeville and motion picture houses, and the Little Theatre which was twice awarded the Belasco Prize. There are theatres costing as much as $2,000,000 and seating as many as 3,000 persons.

Dallas' climate as a whole is pleasant and invigorating, without severe extremes, and November in Texas as a rule is crisp and clear, ideal for travel and for outdoor sports.

Dr. Curtice Rosser, of the Publicity Committee, promises in later issues, to give data on the Hospital and clinical facilities of the Convention City. Meanwhile, the medical profession of Dallas and of Texas, invites you to plan to attend the Southern Medical Association Convention this fall.

Dr. W. S. Beazley,

Richmond, who suffered a fracture of the skull when he tripped in getting out of his automobile, about the middle of July, is now reported as much improved.

Dr. J. B. Winfield,

Clarksburg, W. Va., who is a graduate of the University College of Medicine, Richmond, in the class of 1897, is spending the summer with his family on their farm at Fairfax, Va.

Marriage and Social Diseases.

A recent report of the Vienna Marriage Consultation Bureau, a sub-department of the municipal public health service, shows that 18.7 per cent of the persons applying to the Bureau for information and advice are infected

with a venereal disease. The Bureau upon recent completion of two years of evidently successful service is of the opinion that the value of the service rendered by it is in the dissemination of proper information concerning venereal diseases and the serious danger of marriage in such cases. In the United States, according to the U. S. Public Health Service, seven states require a medical certificate before marriage and fourteen states, while without such a requirement, have laws which aim to prevent venereal disease infection through marriage.

The American Electro-Therapeutic Association

Will hold its thirty-fifth annual session in Chicago, with headquarters at Hotel Drake, September 15-17. The secretary is Dr. Richard Kovacs, 223 East 68th Street, New York.

Dr. Charles B. McNairy

Has resigned as superintendent of the North Carolina State Training School for the Feebleminded, at Kinston, N. C., and has resumed private practice at Lenoir, N. C. He has been succeeded by Dr. William H. Dixon, of Ayden, N. C.

Dr. H. Hartwell Bass,

Who has been practicing for a number of years at Henderson, N. C., has moved to Philadelphia, where he expects to make his home in the future.

Birth Rate in Virginia.

According to statistics which are being compiled, although more babies were born in Virginia during 1924 than in 1923, the rate per 1,000 was slightly less, owing to estimated increase in population. The decline is entirely attributable to the lower birth rate for negroes. The white rate more than held its own. The illegitimate birth rate still remains about the same as for previous years.

Pediatric Annex for U. Va. Hospital.

Construction is progressing satisfactorily on the Pediatric Annex to the out-patient department of the University of Virginia Hospital, where children's clinics will be conducted. It is expected that this annex will be ready for use about the middle of September.

Eye Hazards in Industrial Occupations.

According to a report recently issued by the National Committee for the Prevention of Blindness, with headquarters at 130 East 22nd Street, New York City, approximately 15,000 of the 100,000 blind persons in the United States are the industrial blind—persons who have lost their sight in the pursuit of industrial occupations. The report states that, although from a national point of view the metal manufacturing industries are the source of the greatest number of serious eye injuries, in Pennsylvania the coal mining industry ranks first as a cause of industrial blindness, and in Wisconsin hand tools constitute the greatest single cause of eye injuries. As an example of the important part that eye injuries play in industries, it is stated that in a large shipbuilding company's dispensary, 38 per cent of all injuries treated were eye injuries.

Dr. William C. Ford,

Woodstock, Va., has been named one of the school trustees of Shenandoah County, for the ensuing year.

Kendig Brothers Hospital,

Victoria, Va., has recently issued an interesting "Report and Descriptive Booklet" of its activities. In spite of the fact that the regular capacity of the hospital is only twenty beds, it has ministered to a large number of sick and suffering in Southside Virginia and records show that results have been as satisfactory as in larger hospitals. This hospital is thoroughly up-to-date in equipment and management and is to be congratulated upon the good work it has accomplished.

Civil Service Examinations.

The U. S. Civil Service Commission, Washington, D. C., announces open competitive examinations for:

Occupational therapy aide and occupational therapy pupil aide, applications to be rated as received until August 31, 1925;

Physiotherapy aide, physiotherapy pupil aide and physiotherapy assistant, receipt of aplication for these positions to close August 29, September 26, October 24, and November 28, 1925;

Junior medical officer, assistant medical officer, associate medical officer, medical officer, and senior medical officer, applications to be rated as received until December 30, 1925.

Maternal Death Rates in 1924.

The maternal death rate among the industrial policy holders of the Metropolitan Life Insurance Company declined during 1924, ac-

cording to the company's statistical bulletin. Deaths from puerperal septicemia or child-bed fever dropped to 6.6 per 100,000, the lowest figures ever recorded for the women insured in the company's industrial department. The declining death rate from this disease is due to some extent at least, the report states, to more and better nursing before and after confinement and to better delivery service in the hospital and home.

School Hygiere, Panama.

Annual examination of school children was begun for the first time in Panama and the Canal Zone last October. The schools now have the services of a full-time nurse. Each child receives a thorough examination, is weighed and measured, and then referred to specialists for examination of eyes, ears, nose, throat, lungs and heart.

Child Welfare, Germany.

The importance of orthopedic exercises for school children is emphasized in a recent circular of the Prussian Minister of Public Instruction. He ordered that physical-education teachers receive training in giving such exercises.

Public Nursery School.

Highland Park, Mich., has what is apparently the first public nursery school in the United States. The school was opened December 9 and now has an enrollment of fifteen children between two and one-half and four and one-half years of age. The school also serves as a laboratory where high school girls may receive practical training in child care.

For Sale.

X-ray equipment in good condition, offered at very low price, account closing private hospital. Vertical and horizontal fluoroscopes (Victor), Scheidel transformer, also accessories. Addres, P. O. Box 468, Lynchburg, Va. (Adv.)

For Sale.

Have recently closed small private hospital fully equipped with best material available. Sterilizing outfit, adjustable bedside tables, metal back rests, fracture cradles (for bed clothing) and other hospital and operating room equipment to be disposed of at greatly reduced prices. Address, Box 34, Lynchburg, Va. (Adv.)

Obituary

Dr. Malcolm Graham Robinson,

A well known physician of Southwestern Virginia, died at his home, Wytheville, Va., June 25. He was born in Wythe County, Va., fifty-five years ago. After attending Randolph-Macon College, he entered the Medical College of Virginia, Richmond, from which he graduated in 1897. He had been a member of the Medical Society of Virginia since 1899.

Dr. Albert John Ochsner,

Renowned as surgeon and author, died at his home in Chicago, Ill., July 25, death being due to angina pectoris. Dr. Ochsner graduated in medicine from Rush Medical College, Chicago, in 1886, following which he studied for a couple of years in Vienna and Berlin. Since 1900 he had been professor of clinical surgery in the University of Illinois. He was chief surgeon to Augustana and St. Mary's Hospitals in Chicago. He was a member of numerous medical and surgical organizations and ex-president of several.

Dr. Ochsner was one of the invited guests at the meeting of the Medical Society of Virginia in Staunton, last year, and is pleasantly remembered by those of our members who were fortunate enough to meet him at that time.

Dr. Oscar Henry Coumbe,

Of Washington, D. C., a member of the Medical Society of Virginia, died in that city, June 12. Dr. Coumbe was born in Washington, sixty-six years ago, and studied medicine at the National University of the District of Columbia, from which he graduated in 1891. Dr. Coumbe specialized in obstetrics and gynecology.

Dr. Robert W. White,

Of Chincoteague, Va., died July 21, of valvular disease of the heart. He was seventy-two years of age. He moved to this state from Wilmington, Delaware, in 1883, since which time he had practiced at Chincoteague.

Dr. Zeno Leonidas Weaver,

Formerly of Rockingham County, Va., died at his home in Williamsport, Md., July 18, aged forty-nine years. He graduated from the Medical College of Virginia, Richmond, in 1900, and was at one time a member of the Medical Society of Virginia. His wife, father and a large family connection survive him.